

PART 1

S. HRG. 105-393

AGRICULTURE, RURAL DEVELOPMENT, AND RE- LATED AGENCIES APPROPRIATIONS FOR FIS- CAL YEAR 1998

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE
COMMITTEE ON APPROPRIATIONS
UNITED STATES SENATE
ONE HUNDRED FIFTH CONGRESS

FIRST SESSION

ON

H.R. 2160/S. 1033

AN ACT MAKING APPROPRIATIONS FOR AGRICULTURE, RURAL DEVEL-
OPMENT, FOOD AND DRUG ADMINISTRATION, AND RELATED AGEN-
CIES PROGRAMS FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 1998,
AND FOR OTHER PURPOSES

**Commodity Futures Trading Commission
Department of Agriculture
Farm Credit Administration
Food and Drug Administration
Nondepartmental witnesses**

Printed for the use of the Committee on Appropriations



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AGRICULTURE, RURAL DEVELOPMENT, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1998

THURSDAY, FEBRUARY 27, 1997

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:05 a.m., in room SD-124, Dirksen Senate Office Building, Hon. Thad Cochran (chairman) presiding.
Present: Senators Cochran, Specter, Bumpers, Kohl, Byrd, and Leahy.

DEPARTMENT OF AGRICULTURE

OFFICE OF THE SECRETARY

STATEMENT OF DAN GLICKMAN, SECRETARY OF AGRICULTURE

ACCOMPANIED BY:

RICHARD ROMINGER, DEPUTY SECRETARY

KEITH COLLINS, CHIEF ECONOMIST

STEPHEN B. DEWHURST, BUDGET OFFICER

OPENING REMARKS

Senator COCHRAN. The meeting of our agriculture appropriations subcommittee will come to order.

Today we are pleased to begin the first in a series of hearings to review the President's proposed budget for the Department of Agriculture and related agencies for fiscal year 1998. We are very pleased to begin our hearings with the distinguished Secretary of Agriculture, the Honorable Dan Glickman. We appreciate your presence this morning and we also appreciate the presence of your colleagues, the Deputy Secretary of Agriculture, Richard Rominger; the economist for the Department, Keith Collins; along with Stephen Dewhurst, Budget Officer for the Department.

As we all realize, this subcommittee has jurisdiction over the activities and programs of the Department of Agriculture, with the exception of the Forest Service. The President's budget request for the activities under the jurisdiction of this committee totals \$51 billion for this next fiscal year. This is a net decrease of \$1 billion from the fiscal 1997 enacted level of funding.

Three-fourths of this request is for mandatory programs, so-called because the law directs that payments be made by the Department of Agriculture to beneficiaries of programs and for pro-

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gram activities. This year's level of mandatory spending is \$1.7 billion less than it was for fiscal year 1997.

The President's proposed total discretionary appropriations request for the Department of Agriculture is \$13.2 billion, which is an increase of about \$640 million above the enacted level for fiscal year 1997.

Mr. Secretary, we appreciate your being here to further describe and explain the President's budget request for this next fiscal year. We know that you have prepared a statement for the hearing, and we encourage you to proceed to summarize that. We will make it a part of the record in full, so we will have an opportunity to ask you questions about it.

You may proceed.

STATEMENT OF SECRETARY GLICKMAN

Secretary GLICKMAN. Thank you very much, Senator, Senator Kohl, Senator Byrd. It is an honor for me to be here.

You did introduce my partner, Deputy Secretary Rominger, who is well-skilled in budget and management issues. I have two of the finest career employees in Government with me as well, Steve Dewhurst, our Budget Officer, who has probably been before here more times than he would like to acknowledge, but for many, many years, and Keith Collins, our Chief Economist, who has also been at the Department many, many years. And they are here to bail me out when I cannot answer your questions very well, but they also have a good historical understanding of our operations.

I will summarize my statement, and have my complete statement submitted for the record.

This budget was developed under tight constraints. There are four priorities in this budget, and I thought I would list those and talk a little bit about them. One is expanding economic and trade opportunities. Two is ensuring a healthy, safe, and affordable food supply. Three is managing our natural resources in a sensible way, recognizing that part of that budget is within the confines of another subcommittee because of the Forest Service. And four is reinventing Government and saving taxpayer money.

As part of this budget, we have had to make some difficult decisions. Some of you are probably hearing about some of those decisions in terms of closing offices out in the country. In some cases, those discussions are premature. But, the fact of the matter is that we are an agency in a steep reduction mode. And I will talk about that.

At the same time, we are also an agency in which the laws have been changed which changed our jobs. The farm bill reduced budgetary exposure by providing payments to farmers, which are set by law over a 7-year period. We do not propose changing that at all. However, that changes a lot of our job responsibilities. In addition, implementation of the USDA portion of welfare reform is projected to save nearly \$3.5 billion this next fiscal year, and \$21 billion over 5 years.

BALANCED BUDGET AMENDMENT

I would point out, and I mentioned this at the House hearing yesterday, that while we are clearly doing our part, in terms of

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budget reduction and staff reduction, I will indicate some concerns about the potentially adverse effect on the Department's clientele of an inflexible approach as part of the balanced budget amendment. My concern is natural disasters, which occur every year. We had them in California, we had them in the Dakotas, and they require a great deal of expendable resources.

I am also concerned that the amendment could result in reductions in farm program payments under the 1996 farm bill, as well as the Conservation Reserve Program [CRP] payments. Another concern of mine is the rural constituency is much smaller than the urban constituency, and that rural programs could be particularly vulnerable when those kind of priority decisions have to be made.

DISCRETIONARY BUDGET

The current request before this committee for discretionary budget is about \$13.2 billion. It is about one-half of a billion above the level for 1997. We are also proposing legislation which would increase user fees and limit reimbursements to private insurance companies. With the effect of this legislation, the discretionary budget is pretty flat, about \$12.7 billion.

I would also note that the total number of employee staff-years associated with the budget are down substantially. We are projecting staff-years of about 110,000 for 1998. That compares to nearly 130,000 staff-years in 1993. We are down 20,000 staff-years in 5 years. That is as large a reduction, I believe, as any Federal Government agency has taken. And we are looking, based on the budget numbers, at further staff-year reductions projected for the year 2002. And I will talk a little bit more about that later.

1997 WIC SUPPLEMENTAL

Also associated with this budget, we are requesting a 1997 supplemental of \$100 million for the Women, Infants, and Children [WIC] Program, to prevent a large drop in participation and to ensure a smooth transition between 1997 and 1998.

Let me start with the major priority areas, in terms of economic and trade opportunity. The new farm bill brings new challenges to American agriculture. The legislation provides farmers the flexibility to plant for the market rather than Government programs. This is for the major row crops. To deal with the added risk of farming brought about by this legislation—and there will be added risks as we have increased price volatility already occurring in major commodities—we are expanding crop insurance tools as part of our commitment to maintain a safety net for producers.

REVENUE INSURANCE PILOT PROGRAM

Last year we worked with the private insurance industry in developing a pilot program for revenue insurance, which protects farmers against price declines as well as production losses. Right now, insurance, to the extent that it works, deals with catastrophes, acts of God. We are proposing expanding this to include price/revenue insurance. We are proposing that this program be offered nationwide this next year.

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This will be a budget-neutral proposal and provide for a comprehensive set of improvements in the crop insurance programs. My statement talks a little bit about the improvements in administration of it. But of particular interest to the Appropriations Committee, is the proposal would change both the amount of discretionary funds needed to operate the program and the range of expenses that would be paid with such funds.

SAFETY NET

As part of our safety net proposals, the committee should be aware that we are requesting the authorizing committees to give us authority to extend commodity loans beyond their 9-month levels, in certain circumstances where there is great price volatility, allowing for managed haying and grazing of CRP acreage, increased planting flexibility, and providing for flexibility in the timing of production flexibility contract services. We are also proposing changes in the farm credit area.

Also, to help farmers deal with the added risks of farming, we are requesting appropriated funds to expand the collection and dissemination of weather data for agricultural areas. We are concerned that we need more accurate weather forecasting, which would help producers mitigate the adverse impacts of weather-related events.

The most recent one was the freeze in south Florida, where, what we are seeing is that the agriculture component of the National Weather Service is basically being reduced in terms of the separate reporting stations and operations. We think that we need to augment some of those in our budget as well.

On the area of farm credit, we continue to provide essential financial support for those who cannot obtain credit elsewhere. We are proposing these programs be funded at about a level of \$2.8 billion in loans and guarantees. Portions of both direct and guaranteed farm operating and farm ownership loans will be targeted to beginning and socially disadvantaged farmers.

SOCIALLY DISADVANTAGED FARMERS

We are also requesting that \$5 million be appropriated for fiscal year 1998 to continue the outreach program for socially disadvantaged farmers. Only \$1 million was appropriated in 1997. We have allocated a little bit extra from our fund for rural America, but we believe it is very important to ensure that members of these groups receive the training and management assistance necessary to remain in farming.

In the area of trade we have had some great success. Last year we had a record level of nearly \$60 billion in exports that we achieved. We believe trade is the ultimate safety net. One of every two acres of production in America goes for products that go overseas. It is critical that we continue our trade expansion efforts.

U.S. EXPORTS

Changes in the domestic farm programs have made America's farmers and ranchers more dependent than ever on exports. In addition, although many tariffs and trade barriers have been lowered,

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we continually face new challenges in our efforts to access new markets, such as phony sanitary or phytosanitary measures that are not based on sound science, as well as, concerns about genetically engineered products. Competition remains keen.

Our budget proposals continue our strong commitment to export promotion and growth. They provide a total program level of just under \$7.7 billion for the Department's international programs. Funding for most of these programs is either maintained at the current levels or increased.

In the case of the Export Enhancement Program, the budget provides funding at the maximum level permitted by the 1996 farm bill.

In the area of rural development, portions of rural America continue to face persistent poverty, lack of basic amenities, and limited economic opportunity.

EMPOWERMENT ZONES/ENTERPRISE INITIATIVE

The budget provides funding for several key administration initiatives to address these problems, including the empowerment zone/enterprise initiative, the water 2000 initiative, the President's national homeowner initiative, and the administration's national information superhighway initiative.

The budget provides for about \$9.1 billion in loans and grants under our rural development programs, which is about \$1 billion more than can be supported with the 1997 appropriation. This includes \$1 billion for single family housing direct loans.

Further, we are proposing that \$689 million of the budget authority for rural development, which is enough to support about \$2.5 billion in loans and grants, be provided under the Rural Community Advancement Program [RCAP] authorized by the new farm bill. That will give greater flexibility for the States to set priorities and allow some limited block granting as well.

FUND FOR RURAL AMERICA

As most of you know, we have a Fund for Rural America, which was established in the farm bill, which provided up to \$100 million a year in additional funding for critical rural development and high-priority research. We are proposing a technical correction in that bill, which we will be glad to talk about later.

In the area of research, we are proposing \$1.8 billion for research, education, and extension. I will not go into that in great detail, other than to say, that the priorities in that area, including promotion of development of sustainable farming systems, long-term global competitiveness, and new and improved products, are all the things that will be part of that. Also, Congress will have to reauthorize the research title of the farm bill this year.

In 1998, we will also conduct a census of agriculture for the first time, and thereby expand significantly its role as an information provider. Although we were appropriated funding for the census in 1997, the authorization legislation to transfer the function from Commerce to USDA has not been passed. I urge you to see if you can do that.

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MARKETING AND INSPECTION

In the marketing and inspection area, we are making excellent progress in combating many plant and animal pests and diseases, such as brucellosis. The 1998 budget also provides funds for pest detection activities, such as Karnal bunt, a wheat fungus, and agricultural quarantine inspection along the borders.

In addition, we have several proposals regarding packer market competition and poultry industry competition and compliance recommended by the Advisory Committee on Agricultural Concentration. We believe very strongly that the increased concentration in agriculture, particularly in the livestock industry, is a threat to family farm operations. This is an area that we are looking at very closely.

So that covers the area of economic opportunity.

Quickly, I would like to turn to the area of healthy, safe, and affordable food supplies. Obviously, the main part of that is completing our implementation of the Hazard Analysis and Critical Control Point [HACCP] System, which is a performance-based system to inspect meat and poultry. We are requesting a current law budget of \$591.2 million in that area, to inspect meat and poultry. That is a \$17.2 million increase over the 1997 level, to maintain inspection and continue making investments in technology, training, and science.

USER FEE PROPOSAL

Legislation will be proposed, I should reinforce this because it is very controversial, to recover the direct cost of providing inspection to slaughter plants. In-plant inspection we are asking this to be provided for by user fees which is estimated at \$390 million in 1998. This user fee proposal assures that the resources will be available to provide the level of inspection necessary to meet the demand for such services without being subject to annual budget pressures. This action will also reduce the pressure to trade off investment and improving inspection with the need to meet legislative requirements for providing information.

I might also mention this little side note. Livestock is one-half of the gross sales of American agriculture. Fifty percent of everything we sell in American agriculture, from farmer to rancher, through value added, is in livestock. It is billions of dollars a year. Half of that, by the way, is in the cattle industry.

Our point is that we have to continue to convince the American consumers, which we have successfully done, that their meat and poultry is safe. One outbreak of a problem causes a great reflection of fear on the part of the consumer. We have been lucky that we have not had the problems nor the resistance to good science, as we have seen in other parts of the world, particularly with Western Europe, where we saw meat consumption in Germany fall 50 percent the month after the BSE or mad cow incident came up, and there was not one reported case of BSE in Germany.

We do not have it in this country. We have safe meat and poultry. The public is convinced that we do. And we have to make sure that we continue to fund this meat and poultry inspection operation to continue that consumer confidence.

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We worry that there may not be enough funds in the budget without some form of user fee, but I recognize the controversial nature of this particular proposal.

RESEARCH

As part of the President's recently announced food safety initiative, we are also requesting \$9.1 million for research, education, and improved inspection systems, working with cooperative research land-grant universities, tracing foodborne illnesses. We are requesting an increase of \$10.2 million be made available to the Agricultural Marketing Service [AMS] to administer the pesticide data program. We believe that funding for this program within USDA is preferable to the current funding arrangement through the Environmental Protection Agency [EPA], because we are largely the ones involved in the issue of application of pesticides.

FOOD AND NUTRITION

In the area of food and in the area of nutrition programs, we are proud to say that WIC has grown to full participation, achieving a longstanding bipartisan goal. A budget request of \$4.1 billion is proposed for 1998, to provide adequate resources to support full funding for WIC at 7.5 million participants. We will continue to work with the States to improve caseload management and to operate the program within available funds.

We have also requested \$7.8 billion for the School Lunch and Child Nutrition Programs, and we have stepped up our nutrition education activities, designed to help schools serve more nutritious meals and to teach children healthier eating habits. We are also requesting \$12 million for a new human nutrition initiative in 1998, with increases each year until the initiative reaches \$53 million in the year 2002.

Virtually all the human nutrition research in Government is conducted by the Department of Agriculture. The main centers you may have heard of are at Tufts and at the Texas Medical Center in Houston. But we have centers at the University of Arkansas, where we do a lot of human nutrition research. And we believe this is important to understand better the relationship between diet, cognitive development, and health, particularly for infants and children.

In the area of nutrition assistance, we are working actively with the States to implement welfare reform. We plan to offer modest legislative changes to the authorizing committees to moderate the harsher aspects of welfare reform, to provide a softer landing and extend a helping hand to anyone able to and willing to work but unable to find a job. This legislation would add some money to the budget, and it is something you may want to ask me about later.

FOOD RESCUE

I also want to call your attention to a nonbudget item, but USDA, in the last few years, has adopted a major initiative in the area of food rescue and gleaning. Congress passed the Bill Emerson Good Samaritan Act this past summer, which relieves people of liability in most cases for donating surplus food.

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We estimate that, institutionally in this country, we throw away 15 million meals a day of perfectly healthy food. And we are trying to facilitate, through food banks and through community operations, of not wasting good food. USDA happens to have the only cafeteria in Government which routinely donates our surplus food to the D.C. Central Food Kitchen.

As a result of this bill, several American companies now donate several hundred thousand sandwiches a month into the community food bank operation that was otherwise being thrown away. And this is an area where Government can be a facilitator, without costing any money. It is something that we think is part of the community spirit of this country. The Bill Emerson law had a lot to do with that.

CONSERVATION

The third priority is sensible management of natural resources. The 1996 farm bill extended the Department's conservation responsibilities by creating new programs. Actually, if one were to look at the 1996 farm bill, you would say it was largely a conservation farm bill. It included a lot of new programs.

We face a critical year in deciding the fate of 21 million acres that are coming out of existing CRP contracts. The revised CRP will target only our most environmentally sensitive lands, so that we get the maximum environmental benefit for each dollar spent. Less environmentally sensitive land, better suited for planting crops, will be returned to production.

Using Commodity Credit Corporation [CCC] funds, our goal is to reach and then maintain the 36 million-acre maximum enrollment established by Congress. Although it will take us some time to get there, this is probably the most significant part, conservationwise, of the last farm bill.

In addition, in association with CRP, CCC funds will be used to enroll an additional 212,000 acres into the Wetlands Reserve Program [WRP], which would bring total enrollment to about 655,000 acres in 1998, and reaching a goal of nearly 1 million acres by the year 2002.

Finally, we are requesting appropriated funds of \$821 million for our Natural Resources Conservation Service [NRCS] to carry out its work.

REINVENTION

The final area is reinvention and saving money. USDA continues to implement the reorganization which was authorized by Congress in 1994. We have already consolidated agencies and restructured the headquarters field offices. Our initial streamlining efforts have resulted in substantial reductions in employment, and indicate a savings of more than \$4 billion by the year 1999, and nearly \$8 billion by the year 2002.

We are continuing to close and collate field offices to streamline operations, to provide more efficient services. Further streamlining and downsizing, as well as better management of technology services across the Department is underway.

USDA's total Federal and county employment in 1996 was over 16,000 below its 1993 levels. And by the year 2002, it will be more

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than 26,000 below the 1993 levels. USDA's employment today is lower than it has been at any time in the last 30 years.

When we were asked to streamline and downsize, and this of course started before I got into this job, we are doing just that. I also want to point out something that many of you have told me individually. There are a lot of rumors out there about further closings of offices. Kentucky is one State that I have heard from a lot of folks out there. I sent a letter out, saying that I have not approved any additional plans to close field offices beyond the level of 2,500 field offices that we had agreed to as part of the reorganization. We are about 2,650 now, down from about 4,300.

Senator COCHRAN. Mr. Secretary, since you specifically mentioned Kentucky, I know Senator McConnell has the obligation to chair an appropriations subcommittee at 10:30. If you would permit me, I am going to yield time for him to ask you a question on that.

Secretary GLICKMAN. That is why I referred specifically to you. Because I knew you would have an interest in this.

Senator COCHRAN. Senator McConnell.

FSA FIELD OFFICE CLOSINGS

Senator MCCONNELL. Thank you so much, Senator Cochran. I really appreciate this. I will not take but a moment.

As you know, because we talked about this, the State executive director in Kentucky is running around saying that 50 offices are going to be closed. You had told me and told Senator Ford previously that this was a work in progress.

Secretary GLICKMAN. That is correct.

Senator MCCONNELL. That nobody was to make announcements yet.

Secretary GLICKMAN. That is correct.

Senator MCCONNELL. This fellow seems to me to be totally out of control. I mean Senator Ford, who is obviously not of my party, said to the Farm Bureau just this week that he has told you all you ought to either shut him up or fire him. And my concern is this fellow is sort of running amok across our State. Does he have the authority to do that?

Secretary GLICKMAN. Let me speak to this in a little more generic way, without talking about any individual. I have talked to this particular gentleman, because he is not totally out of line. He got information from the national office to prepare projections of closings based upon a hypothetical plan. Let me just explain it briefly.

Our goal was to get down to 2,500 offices, service centers. These would be combined with USDA offices throughout the country. We are close to that. The President's budget, as proposed, has dollar numbers within the USDA request that would require us to get down to 2,000. That is presuming that you all adopt an appropriations bill that is compatible with his total budget, which you may or may not do.

There was some discussion by some State executive directors [SED] around the country, and I was aware of it, which assumed that if we were going to go get down to 2,000 offices, that would mean some field offices with fewer people. Therefore, you would have to lay off more people in the process, because you would have

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these offices with fewer people. So some of them, I suppose you could call it a rump group of which I was aware, decided to come up with an option by which we would reduce down to a level where we could keep much more of our staff functioning, helping people, but we would not have as many offices. So that was the option that surfaced from the rump group.

Now, what happened inside the Department is that the directive went out to some of the SED's to determine how they would handle this, "option" of going down to 1,500, which, by the way, is 500 more than is proposed in the President's budget. Once I heard about it I sent out a letter last week to all of you which basically said there is no plan on paper to close further offices. I happened to see a wire story about Kentucky concerning something that the State executive director had said. Just let me say, it has happened in other States as well, Senator, besides Kentucky.

Senator MCCONNELL. Mr. Secretary, I do not want to belabor this, and I really thank Senator Cochran for giving me a couple of minutes here. I got your letter. The point is he is still doing that. I strongly recommend that if he does not have the authority to be saying what he is saying, you, as his boss, ought to tell him to quit saying it. We understand that some offices are going to be closed. You are not going to get a wholesale complaint from me about that. I understand the budgetary needs. But he has been just bouncing off the walls, running around the State. We have a turmoil, a general turmoil, down there on this. And I really think you ought to shut him up until you finish your work.

Secretary GLICKMAN. Message heard.

Senator MCCONNELL. Thank you very much, Mr. Chairman.

Senator COCHRAN. Thank you, Senator.

Secretary GLICKMAN. Thank you.

Senator COCHRAN. Mr. Secretary, you may complete your testimony.

ELECTRONIC BENEFIT TRANSFER CARD

Secretary GLICKMAN. Besides talking about that issue, I want to talk a little bit about efforts in the reinvention area to combat fraud and reinvent administrative processes. We are working to complete the Electronic Benefit Transfer [EBT] Program in food stamps. The debit card, we believe, will significantly save taxpayer dollars and reduce fraud. This program is operational in 18 States, and in development in all other States. We are also stepping up our management and integrity efforts in child nutrition and WIC.

In the area of single direct family housing, we have moved to a program called dedicated loans, origination and servicing [DL0S], which is a centralized servicing system of housing. We expect that to save \$400 million over the next 5 years, while providing better service to our borrowers and reducing delinquencies.

I have talked to you a little bit about the potential impact of the budget on USDA service center locations. I know that this creates some hardship in certain places in the country. There is no question we are going to have to probably continue to reduce, but I assure you that we will create no plans on further reductions without notifying you and having you participate in that process.

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I do think, in this era of computers, fax machines, and electronic communications, that we do not need the same field office structure we needed in 1935. We have begun the process of reducing it. But, above all, we have to always keep in mind that how we serve farmers and ranchers, how we serve the people who need our programs, is the key point in terms of that field office structure.

CIVIL RIGHTS

Finally, Mr. Chairman, I want to mention civil rights. Your committee, last year, helped to provide some additional money to strengthen staff resources in the area. We have many activities underway now to reduce the embarrassing backlog of equal employment opportunity and program discrimination complaint cases in USDA. A few months ago, I created a civil rights action team to do a thorough audit of USDA civil rights issues and provide me with recommendations for improvements.

We held a series of listening sessions around the country, to hear from employees and program participants. Deputy Secretary Rominger and I attended most of them. I have received a copy of this report, which we will get to you. Tomorrow I will announce some steps that I am going to take to try to make it clear that our Department ought to be viewed in a positive way, not a negative way, in terms of how we treat our employees and how we treat our customers.

In addition, I have directed the agencies that serve farmers to establish special outreach offices in the field. I am committed to making positive changes to USDA to ensure that both our employees and our customers are treated fairly and with dignity.

Finally, let me just thank you for your help. It is no secret that our committee's budget was one of the few that passed on time, the USDA's budget. And in some cases, we were the only agency in Government operating when there were shutdowns. And I would like to think it was because of the cooperative help with which we have worked together, as well as the bipartisan spirit in agricultural programs.

So I thank you very much, and look forward to your questions.

PREPARED STATEMENT

Senator COCHRAN. Thank you very much, Mr. Secretary. We appreciate very much your cooperation with the committee and your helpful description of this budget request. We have your complete statement, and it will be made part of the record.

[The statement follows:]

PREPARED STATEMENT OF DAN GLICKMAN

Mr. Chairman, Members of the Committee, it is a privilege to appear before you to discuss the 1998 budget for the Department of Agriculture (USDA).

I would first like to express my appreciation for the hard work of this Committee last year that resulted in the timely enactment of the 1997 Agriculture Appropriations Act. We are grateful for your efforts.

The budget again this year was developed under very tight funding constraints. It includes savings that are required to meet the President's objective of balancing the budget by the year 2002 while positively addressing strategic goals for programs that meet the needs of people and protect the Nation's natural resources. There are four fundamental priorities that we focused on in developing our budget proposals for 1998. These include: expanding economic and trade opportunities; ensuring a

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healthy, safe, affordable food supply; managing our natural resources in a sensible way; and reinventing government and saving taxpayer money.

In order to meet our budget priorities, it was necessary to make hard decisions to restrain, reduce, and redirect spending in a number of areas; to include some new user fee proposals; to require employment cuts in many of our major agencies; to absorb part of the increased pay and inflation costs; and to change the way we do business. I should also point out that through recent changes in legislation, USDA also contributes to balancing the budget through reductions in mandatory spending. The Federal Agriculture Improvement and Reform Act of 1996 (the 1996 Act) reduces budgetary exposure by providing fixed and generally declining market transition payments over a 7-year period. Also, implementation of the USDA portion of welfare reform is projected to save \$3.4 billion in 1998 and a total of about \$21 billion over 5 years.

The President's budget proposes \$60.3 billion in budget authority for 1998 for the Department of Agriculture compared to a current estimate of \$60.6 billion for 1997. The staff year level associated with the proposed budget is also worthy of mention. USDA is ahead of schedule in reducing employment based on the original reorganization and streamlining plan. By the end of 1996, we reduced our total staff years including Federal and non-Federal to 113,000—a reduction of 8,000 below our original estimate and more than 16,000 below the 1993 level of 130,000. Those reductions were primarily achieved through normal attrition and the use of early outs and buyouts.

I would like to mention also that, while the Department and its clientele will make the necessary sacrifices to meet the needs to balance the budget, we believe the economy will benefit in the long run. However, I would like to register some concern about the potentially adverse effects on the Department's clientele of the inflexible approach pursued in the balanced budget amendment, which could limit our ability to respond to natural disasters, reduce food stamp benefits in times when the need is greatest, and create intense pressures to reduce valuable programs for our farm and rural clientele.

The request before this Committee for discretionary budget authority is \$13.2 billion. However, the budget proposed legislation in several areas of the Department that if enacted would reduce discretionary budget authority to \$12.7 billion, the same level as 1997. The legislation includes new user fees for the Food Safety and Inspection Service, the Agricultural Marketing Service, and the Grain Inspection, Packers and Stockyards Administration; and legislation to limit reimbursements paid to private insurance companies in the crop insurance program.

Also associated with the 1998 budget, we are requesting a 1997 supplemental of \$100 million for the WIC program to prevent a large drop in participation and to ensure a smooth transition between 1997 and 1998. We are also requesting a \$6.2 million supplemental for the Nutrition Education and Training (NET) program to restore funds lost when the Welfare Reform Act removed the direct funding mechanism of this program, leaving it with no funds. NET provides State level technical assistance for nutrition education throughout the Child Nutrition Programs. The Administration's supplemental proposals are fully offset including a rescission of \$50 million in budget authority for the Public Law 480 Title I program.

FARM AND FOREIGN AGRICULTURAL SERVICES

A fundamental goal of the Farm and Foreign Agricultural Services mission area is the expansion of economic and trade opportunities to further income growth and development throughout rural America. How we accomplish our mission will in large part be determined by the new policies set in place by the 1996 Act, and one of our primary tasks this past year has been to implement the policy and program changes provided for in the 1996 Act. As a result of our efforts, nearly 99 percent of eligible producers entered into production flexibility contracts.

Although the 1996 Act has provided much greater flexibility to our farmers in their production and marketing decisions, it has also increased the risks inherent in farming by reducing the Government's role in supporting incomes and managing supply and demand. As a consequence, we remain concerned about the adequacy of the safety net for our producers and have been working diligently to expand and improve programs which help producers manage their risk.

In this regard the Committee should be aware that we will be proposing legislation to the authorizing committees to improve the safety net for farmers. Our legislation provides discretionary authority to extend commodity loans, allows managed haying and grazing of Conservation Reserve Program acreage, increases planting flexibility and provides for flexibility in timing of production flexibility contract payments. Legislation will also be proposed to expand revenue insurance coverage na-

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tionwide, improve farm credit services, and make other technical adjustments to improve farm programs.

At the same time, we will continue in our efforts to reduce expenses, improve efficiency, and provide improved service to our customers. A major focus of these efforts is the establishment of Field Office Service Centers and associated steps to enhance services in the field.

Farm Service Agency

The Farm Service Agency (FSA) administers the farm credit programs, commodity programs, several conservation programs, and activities of the Commodity Credit Corporation (CCC). The consolidation of staffs and county offices under FSA continues to be a major focus of our streamlining efforts.

FSA staffing has changed dramatically as a result of these streamlining efforts. FSA Federal and county staffing is projected to be down from 19,008 staff years at the end of 1996 to 17,875 staff years at the end of 1997 as a result of buyouts, RIF's, and attrition. The 1998 budget for FSA salaries and expenses proposes a program level of \$954.1 million, estimated to support a ceiling of 15,756 staff years, suggesting further separations in 1998 of approximately 2,119 staff years.

Farm Credit Programs

The farm credit programs administered by FSA continue to serve as a vital source of credit for our Nation's farmers and ranchers. Over the last two decades or more, these programs have changed significantly. Guarantees of loans made by private lenders now comprise the bulk of activity. A portion of the direct loans are targeted to beginning and socially disadvantaged farmers and ranchers, and far more attention than in prior years is being paid to repayment ability and adequate security.

The 1998 budget provides for a total of about \$2.8 billion in farm credit program loans and guarantees, which is about \$300 million less than the amount supported by the 1997 appropriation. Of the reduction, approximately \$200 million is related to the guarantee portion of the farm ownership loan program. The \$400 million guaranteed farm ownership program provided for in the 1998 budget reflects the actual demand for the program in recent years. The remaining farm ownership and operating programs are generally funded at the 1997 supportable levels with a modest increase for the credit sales program. In addition, the 1998 budget proposes to maintain the emergency disaster loan program at \$25 million.

Commodity Credit Corporation

The Commodity Credit Corporation (CCC) programs are carried out by a number of agencies. It is the source of funding for most of the conservation programs administered by FSA and the Natural Resources Conservation Service (NRCS), commodity programs administered by FSA, and most of the export programs administered by the Foreign Agricultural Service (FAS). The CCC is also the source of funding for certain administrative support services associated with delivery of these programs.

Provisions of the 1996 Act limit CCC expenditures for computer equipment and cap reimbursements to agencies for administrative support services at 1995 levels. These provisions impose significant restrictions on the availability of CCC funds for transfers and reimbursable agreements used to fund conservation technical assistance and other support services for the conservation, commodity, and export programs.

The request for 1998 appropriations to reimburse CCC for net realized losses will cover the amount of the loss incurred 2 years earlier which has not been previously reimbursed. The 1998 budget requests \$0.8 billion for the balance of 1996 losses not reimbursed through appropriations in 1996 and 1997. Appropriations to reimburse CCC for net realized losses incurred in 1997 will be requested in the 1999 budget.

Reflecting the pattern of outlays for the commodity programs, total CCC outlays have declined from a peak of \$26 billion in 1986 to less than \$5 billion in 1996. Including conservation programs and other programs for which CCC funding was authorized by the 1996 Act, CCC outlays are projected to total \$7.8 billion in 1997 and \$9.9 billion in 1998, and decline to about \$7.6 billion by 2002.

Conservation Programs

The Conservation Reserve Program (CRP) is the major conservation program administered by FSA. The 1996 Act reauthorized the CRP, switched financing for the program from appropriated funds to CCC, and set maximum enrollment at 36.4 million acres. The 1998 budget assumes a competitive bid process will be used to enroll nearly 19 million acres of new and expiring acres in 1997. Enrollments in subsequent years are assumed to gradually increase total enrollment to 36.4 million acres by 2002.

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The budget also reflects provisions of the 1996 Act authorizing CCC funding for a number of new conservation programs most of which will be administered by the NRCS in cooperation with FSA.

The Agricultural Conservation Program, the Colorado River Basin Salinity Control Program, the Water Quality Incentives Program, and the Great Plains Conservation Program were replaced by the Environmental Quality Incentives Program. The Flood Risk Reduction Program provides incentives to move farming operations from frequently flooded land, and the Conservation Farm Option gives producers incentives to create comprehensive farm plans. The Wildlife Habitat Incentives Program provides cost-share assistance to landowners to implement management practices improving wildlife habitat. The Farmland Protection Program provides for the purchase of easements limiting nonagricultural uses on prime and unique farmland.

The 1998 budget does not include a request for funding the Emergency Conservation Program (ECP). Under this program, the Department has shared the cost of carrying out practices to assist and encourage farmers to rehabilitate farmland damaged by natural disasters. ECP received emergency funds of \$25 million in 1997. The President's Budget, however, proposes the establishment of a new \$5.8 billion contingent reserve for emergency funding requirements for various disaster assistance needs. This fund would be available to the President for disaster relief purposes including use in the Department's emergency conservation activities.

CCC outlays for CRP and other conservation programs are projected in the 1998 budget to increase from negligible levels in 1996, when rental payments were funded through appropriations, to \$1.9 billion in 1997 and to \$2.2 billion in 1998.

Commodity Programs

The 1998 budget projects CCC outlays for commodity price and income support programs administered by FSA will increase from about \$5.0 billion in 1997 to \$6.2 billion in 1998, and then decline again to about \$4.0 billion by 2002. These projections largely reflect the pattern of expenditures established in the 1996 Act, with payments for production flexibility contracts increasing between 1997 and 1998 and declining thereafter.

The 1996 Act fundamentally restructured income support programs and discontinued supply management programs for producers of feed grains, wheat, upland cotton, and rice. The income support programs were changed by replacing the deficiency payment program, which was tied to market prices and was in place since the early 1970's, with a new program of payments that generally are not related to current plantings or to market prices. The 1996 Act also expands planting flexibility and suspends the authority for the Secretary to require farmers to idle a certain percentage of their cropland in order to be eligible for income support payments.

Dairy policy also is changed under the 1996 Act with phaseout of price support and consolidation of milk marketing orders. The new law also alters the sugar and peanut programs.

These changes have diminished the traditional role of the farm programs as a buffer against fluctuations in production and commodity prices. Our greatest challenge from the 1996 Act is to find new ways to help farmers thrive in an increasingly risky environment, and yet not be involved in the micromanagement of agricultural decisions. That is why risk management has become a top priority, and why the President and the Department attach such importance to enactment of legislation designed to improve the programs that help farmers better manage production and market risk.

Risk Management Agency

The 1998 budget provides funding for the crop insurance program administered by the Risk Management Agency (RMA) under both current law and new legislation to be submitted to the authorizing committees to improve the safety net for farmers by establishing a nationwide program for revenue insurance. Revenue insurance protects producers' income against shortfalls due to either price or yield fluctuations. Our legislative proposal is budget neutral overall. However, it provides for a reduction in the discretionary spending portion of program expenses, which is likely to be of particular interest to the Appropriations Committees.

Under current law, funding for sales commissions, which have been treated as mandatory spending, shift to discretionary spending in 1998. The budget provides \$203 million for this expense. Further, it provides \$68 million in discretionary spending for Risk Management Agency's (RMA) own administrative expenses. All other expenses of RMA are treated as mandatory, although subject to appropriation, for which the budget provides "such sums as may be necessary." The 1996 Act created RMA to administer the crop insurance program and to carry out other risk

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management functions. Previously, the crop insurance program was administered by FSA, which retains responsibility for the Noninsured Assistance Program (NAP).

The Administration's proposal to establish a nationwide program for revenue insurance reflects the strong demand among producers that we have seen for new revenue insurance products such as Crop Revenue Coverage (CRC), Income Protection (IP) and Revenue Assurance (RA). Current law, however, limits RMA's authorities in the revenue insurance area to pilot programs. In implementing the revenue insurance programs, no additional premium subsidy has been paid, and the expected 1996 loss ratio experience is within the statutory limits and comparable to RMA's standard multi-peril production risk coverage. The only additional cost to the Government has been a modest increase in delivery expenses, including underwriting gain paid to the insurance companies.

To offset the additional delivery expenses and the expected growth in market penetration involved in expanding revenue insurance nationwide, the Administration's proposal provides for a change in the administrative (delivery) expense reimbursements paid to private insurance companies, as well as an incremental reduction in the loss ratio. The Administration is proposing that the reimbursement rate for delivery expenses be reduced from 28 percent under current law to 24.5 percent of the premium for multi-peril coverage. This reduction is based on extensive analysis conducted by RMA and the General Accounting Office. It will reduce discretionary spending for delivery expenses from \$203 million under current law to \$149 million under the proposal. Further, our proposal would make a portion of the overall reimbursement rate discretionary and subject to appropriation whereas current law treats only the sales commissions portion of the reimbursement as discretionary. We believe this change offers insurance companies more flexibility for adjusting to the reduced reimbursement rate.

Finally, the legislative proposal will provide more flexibility for determining subsidy amounts and establishing pilot programs. It will also require a processing fee for RMA's review and approval of industry requests for new insurance products, and make certain changes in program compliance requirements. None of these changes is expected to have a budgetary impact.

International Trade and Export Programs

Exports of U.S. farm and food products achieved a second straight year of robust growth in 1996 and set another record at just under \$60 billion. With the strong, back-to-back gains of the last 2 years, U.S. agricultural exports have increased by nearly \$22 billion or over 50 percent since 1991. As a result, agriculture led all U.S. trade categories as the most significant contributor to the U.S. balance of trade and supported one million jobs both on and off the farm, one-third of which were in our rural areas.

These strong export gains provide convincing evidence that American agriculture is reaping the benefits of the North American Free Trade Agreement, the Uruguay Round Agreement on Agriculture, and the more than 200 other trade agreements the Administration has successfully negotiated. As a result of these agreements, we now have the most open world market of this century and enormous opportunities for additional export growth.

Further progress on the trade front is crucial to American farmers and ranchers. Changes in the domestic farm programs made by the 1996 Act have made U.S. producers more dependent than ever on exports to maintain and expand their income. It is critical, therefore, that we continue our aggressive trade promotion efforts to help U.S. producers and exporters take full advantage of emerging export opportunities. At the same time, we must continue to adapt and improve these efforts to meet today's challenges and keep pace with the competition.

The 1998 budget continues the Administration's commitment to export promotion and growth by providing a total program level of just under \$7.7 billion for the Department's international programs and activities.

For the CCC export credit guarantee programs, the budget provides a total program level of \$5.7 billion, an increase of \$200 million above the 1997 level. The increase consists of export credit guarantees which will be made available to emerging markets for U.S. agricultural products. This complies with provisions of the 1996 Act which require that \$1.0 billion of export credit guarantees be made available to emerging agricultural markets during the 1996 to 2002 period; these guarantees will be made available in annual installments of \$200 million beginning in 1998.

The budget also continues two other export credit initiatives. Included within the overall program level for CCC export credit guarantees are \$350 million of supplier credit guarantees, an increase of \$100 million above the 1997 level. These guarantees, which were first made available in late 1996, allow exporters of U.S. agricultural products to obtain CCC guarantees for short-term credit extended directly to

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foreign buyers. Supplier credit guarantees are expected to be particularly useful in facilitating sales of processed and high value products.

The budget also includes \$100 million of facilities financing guarantees, unchanged from the current estimate for 1997. Under this initiative, CCC will provide guarantees to encourage the establishment or improvement of agricultural related facilities and/or services to address infrastructure barriers to increasing sales of U.S. agricultural products in overseas markets.

The budget provides higher program levels for our two export subsidy programs in 1998, the Export Enhancement Program (EEP) and Dairy Export Incentive Program (DEIP). In the case of EEP, we propose to make available \$500 million, the maximum level permitted by provisions of the 1996 Act and a \$400 million increase over 1997. As you are probably aware, EEP and DEIP program activity was reduced in 1996 as a result of world commodity supply and competitive conditions. The higher program levels established for 1998 will allow for increased sales under the programs in response to changed market conditions.

For the Market Access Program (MAP), formerly the Market Promotion Program, the budget continues funding at its maximum authorized level of \$90 million. During the past year, changes have been made in MAP to make it more targeted and more friendly to small businesses. In 1996, 56 percent of the funds for promotion of branded products was made available to small entities, up from 41 percent in 1994, and another 20 percent was made available to farmer cooperatives. Additional program improvements have recently been made which are designed to broaden participation, clarify program participation criteria, strengthen evaluation and accountability, and simplify program requirements for participants.

For the Public Law 480 foreign food assistance programs, the budget proposes a total program level of \$990 million. This is expected to provide for approximately 3.2 million metric tons of commodity assistance, unchanged from the level currently estimated for 1997.

I would like to highlight one component of our Public Law 480 budget proposals in particular. It transfers the budget and expenditures for the Title I concessional sales program from the international affairs function to the agriculture function of the Federal budget. This proposal is an outgrowth of recent changes in the Title I statutory authorities which have placed a much greater emphasis on the program's market development objectives. With these changes, the role and importance of the Title I program in the Department's overall long-term market development strategy has increased. Shifting Title I to the agriculture function will allow the program to be managed and budgeted as part of a consistent package of agricultural export programs; all of our other export programs are presently included in the agriculture function. I urge your favorable consideration of this proposal.

For the Foreign Agricultural Service, which administers the Department's important trade, export, and international cooperation activities, the budget provides appropriated funding of \$151 million, an increase of \$15 million above the 1997 level. Most of the proposed increase will be used to help meet the costs of several FAS activities which are currently supported with CCC funds made available to FAS through reimbursable agreements. The budget proposes that future funding of these activities will be included in the FAS appropriation; with this change their funding will no longer be subject to the annual limitation on CCC reimbursable agreements established by the 1996 Act. These activities include the Emerging Markets Program, under which technical assistance and training are provided to promising, overseas growth markets where there is potential to increase U.S. exports significantly over the long term. They also include the operating costs of the CCC Computer Facility, which serves as the Department's collection point for international production intelligence and crop estimates, and for other, related FAS Information Resources Management costs.

The budget also includes two innovative proposals to assist FAS address variability in the annual operating costs of its overseas offices. This variability can result from a number of factors, including exchange rate fluctuations. The FAS budget provides an advance appropriation of \$3 million for 1999 to offset wage and price increases that occur at its overseas posts in 1998 and that the agency is able to document. In addition, the budget includes language that will allow funds appropriated to FAS to be obligated over 2 years rather than 1 year; this will allow savings that may be realized in the cost of overseas operations to carry over for use in the following year. These savings generally result from exchange rate gains.

RURAL DEVELOPMENT

Overall, the 1998 budget reflects the Administration's strong support for ensuring that rural Americans have the ability to take advantage of the same opportunities

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for economic growth that exist in urban areas. It supports the Administration's Water 2000 initiative which targets resources to the estimated 2.5 million rural residents who have some of the Nation's most serious drinking water availability, dependability, and quality problems. It continues support for direct and guaranteed loans to help meet the Administration's National Homeownership initiative. It provides additional support for the Administration's National Information Super-highway initiative. It also targets resources to those rural residents and communities most in need of assistance through the Empowerment Zones and Enterprise Communities (EZ/EC) initiative.

The 1998 budget provides \$175 million more budget authority for Rural Development than was provided by the 1997 appropriation. The increase is expected to support \$1 billion more in loans and grants than is currently estimated for 1997.

The 1996 Act authorized the delivery of the Department's rural development programs under provisions of the Rural Community Advancement Program (RCAP). RCAP allows the Department to manage a portion of its current array of rural development programs through an integrated initiative that: (1) increases flexibility to more effectively meet local needs; (2) reinvents program implementation and increases reliance on performance measures; (3) ensures participation in the development of State strategic plans from State and local officials, the non-profit and private sectors, the State Rural Development Councils, and others involved in the rural development process; and (4) targets a portion of the rural development funding to Native Americans. The 1998 budget fully implements RCAP, including the creation of block grants to the States for the administration of program activities similar to those conducted under the Department's ongoing rural development programs.

The 1996 Act also authorized the Fund for Rural America, which made \$100 million available for rural development and research in 1997. We are proposing a technical correction to this Act to correct a drafting error in order to move up the release date making another \$100 million available in 1998.

Rural Utilities Service

Without the Department's rural utilities programs, much of rural America would have been unable to obtain, at reasonable prices, basic infrastructure such as electricity, telephone, and water and waste disposal services. In earlier times, progress was measured in terms of the number of farms and rural households receiving any level of services. Today, the primary need is to assure quality infrastructure and service at a reasonable price so that rural America can keep pace with modern technology and clean water requirements.

The 1998 budget provides for \$1.5 billion in electric and telecommunications loans, approximately the same level as 1997. Within the total, the 1998 budget provides for an increase of about \$56 million for 5 percent electric loans, and for reductions of \$56 million in direct municipal and \$35 million for 5 percent telecommunications loans. Electric and telecommunications loans made through the Federal Financing Bank and Treasury rate telecommunications loans would be funded at their 1997 levels.

There would be \$175 million in loans made by the Rural Telephone Bank (RTB), the same as the 1997 level. The Administration continues to work with the industry towards the goal of privatizing the bank on a reasonable schedule. The equity of RTB continues to grow and by the end of 1998 we estimate sufficient funds would be available to retire the Government-owned stock in the bank and, thus, achieve privatization under current law. The Administration is in the process of developing proposed legislation to facilitate privatization.

With regard to the distance learning and medical link program, the 1998 budget includes about \$21 million for grants and \$150 million in loans at the Treasury rate, which requires budget authority of \$21 million for both programs. In 1997, Congress provided budget authority of \$9 million which the Department converted into a grant program of about \$7.5 million and a loan program of \$150 million at the Treasury rate. This program encompasses two of the most useful applications of modern telecommunications—education and medical services. Applications for this program are well in excess of current funding. The increase in grant funding will provide vitally needed assistance to some of rural America's most remote and poorest communities.

The water and waste disposal program is one of the Administration's highest priorities. A program level of \$809 million in loans and \$484 million in grants will allow the Department to continue making significant progress towards meeting the goals of the Administration's Water 2000 initiative. Water 2000 targets resources to the estimated 2.5 million rural residents who have some of the Nation's most serious drinking water availability, dependability, and quality problems—including

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the estimated 400,000 rural households lacking such basic amenities as complete plumbing.

Rural Housing Service

For rural housing, the 1998 budget supports almost 120,000 housing units in rural America, compared to about 104,000 in 1997. It provides for about \$3.0 billion in guaranteed single family housing loans, and \$1.0 billion in direct single family housing loans. Interest rate adjustments in 1997 reduced the direct loan program to \$585 million. Restoring the \$1.0 billion program level in 1998 will require \$45 million in additional budget authority. These loans go to low and very low income families. Families with higher incomes are served through unsubsidized guarantees of loans made by private lenders. To further the President's National Homeownership initiative, which seeks to increase the rate of homeownership in the U.S. to an all-time high, the budget provides for \$3.0 billion for unsubsidized guarantees of loans made by private lenders, \$300 million more than the 1997 level. The budget includes an additional \$100 million to be set aside for current direct loan borrowers who can afford to obtain private credit for refinancing. The budget also provides for \$25 million in direct loans for the sale of inventory property.

The rural rental housing program would be maintained at the 1997 level of about \$150 million, and the budget request reflects proposed legislation to shorten the loan terms from 50 to 30 years while amortizing the loan over 50 years. Rental assistance payments, most of which is needed for the renewal of expiring contracts, would be increased from \$524 million to \$593 million. This amount includes \$52.5 million in funding to replace expiring HUD Section 8 rental assistance contracts with less costly RHS rental assistance. The HUD budget request has been reduced by a corresponding amount, reflecting this transfer of responsibilities to USDA.

Rural Business-Cooperative Service

Jobs are the cornerstone of all economic development—rural as well as urban. The Department's role in creating jobs and improving the infrastructure in rural areas is both financial and supportive. Despite budgetary pressures, it is important that the job creation and retention programs of rural development remain adequately funded.

The business and industry loan program has been expanded over several years from a relatively modest \$100 million level to about \$700 million in guaranteed loans in 1997. In 1997, Congress provided for a \$50 million direct loan program to augment the guaranteed loan program. The 1998 budget maintains the direct loan program at \$50 million, the guaranteed loan program would be funded at \$611 million.

The Alternative Agricultural Research and Commercialization program would be increased from \$7 million in 1997 to \$10 million in 1998. This program is particularly useful in meeting the needs for capital to commercialize innovative value-added products from agricultural and forestry materials and animal by-products.

The budget also proposes a change in the method of funding for the rural economic development loan and grant program. This program provides financial assistance to Rural Utilities Service (RUS) borrowers who use the funds to provide financing for business and community development projects. In 1997, the Department used interest generated from the voluntary cushion of credit account of RUS borrowers to fund a \$20 million grant program, and Congress appropriated funding for a \$12.8 million loan program. In 1998, the budget proposes to use the cushion of credit account to fund both the loan and grant programs.

The budget also proposes a \$2 million increase in the level of funding for research on rural cooperatives. This increase is provided within the salaries and expense account to fund cooperative agreements.

Finally, I would mention that about \$135 million of the rural development program funding would be targeted to EZ/EC. The EZ/EC initiative reaches communities with the most persistent poverty and other economic adversity, which have developed strategic plans for development.

FOOD, NUTRITION AND CONSUMER SERVICES

While USDA farm and food safety programs help ensure a safe and affordable food supply, the nutrition programs help to ensure that food supply is available and affordable to low-income families. The Food Stamp, Child Nutrition, and WIC Programs are the Department's primary vehicles for carrying out this Nation's food assistance policy. Our goal is to help ensure that no low-income child goes to bed hungry. We also seek funding to provide nutrition information and dietary guidance to all Americans in our continued long-term efforts to reduce the risk of diet-related health problems.

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The Food Stamp Program is estimated to cost \$25.1 billion in 1998 under current law. In addition, we are proposing a \$2.5 billion contingency fund to cover unforeseen needs. We project that some 23.4 million people will still need food stamps to maintain or improve their nutritional status during 1998. Although this number is still high, it is down substantially from the peak of 28 million food stamp participants reached in March of 1994, thanks to an improving economy.

The budget also includes several proposed legislative changes to permanent food stamp law that would add an additional \$0.8 billion to this estimate in 1998, and \$3.3 billion over 5 years. We believe these changes are necessary to moderate the harsh effects last year's Welfare Reform Act are having on some food stamp eligibles.

The Administration's proposal would extend the time limits on unemployed adults with no dependents from 3 months out of every 3 years to 6 months out of every year. At the same time, stronger penalties are proposed for individuals who refuse to accept employment, or fail to comply with work requirements. The proposal also would provide relief to households with high shelter costs by increasing the amount they may deduct from their income when applying for food stamps; and it would delay implementation of the ban on aid to legal immigrants for up to 5 months while these individuals seek naturalization. Meanwhile, we remain committed to working with the Congress and the States to implement the new welfare reform provisions. We are also committed to modernizing benefit delivery via nationwide use of Electronic Benefit Transfer; and we are continuing our efforts to root out food stamp fraud by cracking down on retailer and participant abuses, as well as reducing program errors causing overpayments.

For the Child Nutrition Programs, including the National School Lunch, Breakfast, Child and Adult Care Food Program, Summer Food Service, and Special Milk Programs, we are requesting \$7.8 billion, about \$0.9 billion less than the 1997 appropriations. Our request assumes continued full funding for all of these programs, as well as better targeting of funds in the family day care program as required by welfare reform. Within this budget, the funds requested to support Team Nutrition are very important because the National School Lunch Program touches almost all school children during the year. This program works with schools to help them serve meals that meet the 1995 Dietary Guidelines for Americans and to help schools teach children about nutrition. This is a critical component of the Department's commitment to improve the health and welfare of children by promoting food choices for a healthy diet.

Our WIC request for 1998 of \$4.1 billion, an increase of \$0.4 billion above the 1997 appropriation fulfills the President's commitment to fully fund WIC. As indicated, the Administration is also proposing a supplemental of \$100 million for WIC in 1997. Without the supplemental many States will have to cut participation significantly in 1997. With several new initiatives to improve program management, as well as careful food and formula cost containment, the 1998 request should be adequate to support all eligibles who choose to participate. WIC eligibility is based on household income and individual nutritional risk. With this now mature program, we will work with the States to improve program management and operate the program within available funds.

The budget proposes increases in several of the commodity assistance programs. Increases for Food Distribution on Indian Reservations and the Commodity Supplemental Food Program are necessary to maintain program levels. Because of the large increase in mandatory and discretionary funding for TEFAP in 1997, we believe discretionary funding can be brought down by \$45 million leaving a program that will still total \$145 million.

For the Center on Nutrition Policy and Promotion, our budget proposes \$2.5 million, an increase of \$281,000 over 1997. This will enable the Center to continue to help all Americans reduce their risk of nutrition-related disease.

Finally, let me say just a few words about the Administration's commitment to food recovery and our efforts to expand food recovery through volunteerism. Food recovery allows us to share, at virtually no cost to the taxpayer, part of the immense food resources that Americans otherwise allow to go to waste. As the recently enacted Good Samaritan Act demonstrates, there is widespread, bipartisan support for food recovery. No one wants to see food go to waste. The hard part is how to get organized to avoid the waste. Since the food is available for the giving, new governmental organizations are not needed. Volunteerism needs to be encouraged to identify donors, organizations that can adequately store and transport recovered food, and organizations that can distribute the food to needy people. While our budget does not propose any new spending on food recovery, we are working within the Administration on a proposal to promote food recovery through creation of a non-governmental, charitable foundation. You will hear more about this proposal shortly.

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FOOD SAFETY

Last July we reached a milestone in our strategy for making significant gains in improving the safety of America's food supply. We published the final rule for Pathogen Reduction and Hazard Analysis and Critical Control Point (HACCP) Systems for meat and poultry products. This rule modernizes a 90-year-old inspection system and lays out the Administration's commitment to ensure a healthy, safe, and affordable food supply.

On January 27, 1997, we reached our first implementation date. All meat and poultry establishments now have in place standard operating procedures for sanitation to ensure they are meeting their responsibility for maintaining sanitary conditions, thereby reducing the potential for contamination. In addition, slaughter establishments have begun testing carcasses for generic *E. coli* to ensure their processes are under control with respect to prevention of fecal contamination. Next January 26 the largest establishments will be required to have the HACCP systems in place. The largest slaughter establishments and those producing ground product will have to meet *Salmonella* performance standards, thereby implementing a major portion of the science-based inspection system. By January 25, 2000, all the provisions of the rule will be implemented.

The final rule sets an important framework for change, but by no means is it the culmination of our strategy. Much more needs to be done to ensure that we can meet today's and tomorrow's food safety challenges.

The 1998 budget proposes an increase of \$17.2 million under current law to maintain inspection and to continue making investments in technology, training, and science. It is expected that the implementation of the HACCP rule will generate the efficiencies necessary to maintain the level of inspection necessary to ensure the safety of the growing supply of meat and poultry products with the current level of inspectors. Our 1998 budget request builds on the 1997 budget approved by Congress, which maintains a frontline workforce capable of providing rigorous science-based inspection. Furthermore, our budget request reflects a 1997 budget decision by the Administration and Congress to reallocate inspection resources from traditional in-plant settings to high risk food safety areas beyond the confines of the plant.

As part of the President's Food Safety initiative, we are proposing to provide HACCP training to State and local food regulatory officers to ensure proper handling of meat and poultry products after they leave official establishments and make their way to consumers. Under the initiative we are also proposing to expand our work with the Centers for Disease Control and Prevention and other public health agencies to identify sources of foodborne illness attributable to *Campylobacter*. This pathogen has been identified as a growing threat to the safety of our food supply.

Legislation will be proposed to recover the direct cost of providing inspection to all meat, poultry, and egg products establishments. Under this proposal the industry will be asked to pay for only the cost of inspection personnel. We estimate that this proposal would generate approximately \$390 million in new revenues. Approximately \$201 million in appropriated funding would be sought for administering the program, including critical food safety initiatives, such as establishing inspection methodology and standards, microbiological testing, technology development, animal production food safety, and epidemiology and emergency response functions. States administering their own inspection programs would continue to be reimbursed by the Federal government for up to 50 percent of the cost of administering their programs.

This user fee proposal assures that the resources will be available to provide the level of in-plant inspection necessary to meet the demand for such services without being subject to annual budget pressures. This action will also reduce the pressure to trade-off investment in improving inspection with the need to meet legislative requirements for providing inspection. As a greater share of agency resources have been allocated to keep pace with the growing demand for inspectors, investment in new inspection systems designed to increase safety and productivity has been hampered. Separating the cost of in-plant inspection from the cost for administering the program will permit the agency to focus more on the investment in science and technology to improve the effectiveness of the program. This proposal has the benefit of providing establishments requiring an intensified inspection presence the added incentive to improve operations in order to avoid higher inspection fees. The proposal is expected to add less than a half a cent per pound to the cost of meat, poultry, and egg products.

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NATURAL RESOURCES AND ENVIRONMENT

The 1996 Act provides the necessary tools that will enable the Department to play a major role in meeting the President's commitment to protecting our natural resources as well as to helping foster a more common sense approach to their overall management. The 1996 Act not only established several new incentive-based programs including the Environmental Quality Incentives Program (EQIP), the Wildlife Habitat Incentive Program, and the Farmland Protection Program but it also reauthorized and refocused two of our most successful conservation programs ever: the Conservation Reserve Program (CRP) and the Wetlands Reserve Program (WRP).

The funding request for the Natural Resources Conservation Service in 1998 totals \$821 million which includes \$549 million for conservation technical assistance. These funds are needed by NRCS to maintain the viability of its base program which are those activities that support locally led, voluntary conservation through the agency's partnership with conservation districts. It is this base program that also provides the foundation upon which the agency will carry out the important new mandates called for in the 1996 Act. However, while these new programs are now funded through CCC and are therefore considered mandatory, their technical support is not and will impose an especially heavy new workload on NRCS that can only be addressed with appropriated funds. To counter the effects of this new workload and to strengthen the agency's base program, the budget includes a \$15 million increase for geographic information systems and related technology to help in further modernizing USDA field service centers and a \$4 million increase for training in rangeland conservation and improving conservation district skills.

In addition to the new demands imposed by the 1996 Act, the Department's reorganization authorized by Congress in 1994 led to significant changes in how NRCS delivers its conservation services to the field. The agency is now able to provide higher levels and more valuable technical assistance to farmers and other clients with proportionately fewer management and support staff. Field staff are moving to service centers where farmers and government officials can conduct their business more efficiently. Decision-making responsibilities previously centralized in Washington are now assigned to regional and State level officials who are in closer contact with agency clientele. Maintaining our technical assistance workforce in the upcoming years becomes even more critical as farmers take advantage of increased global demand and the new program flexibility that will allow them to farm more land more intensively.

Another high priority activity supported by this budget is the need to target adequate levels of assistance to small and minority producers who need help in maintaining their financial viability. A total of \$5 million is being requested for the Outreach for Socially Disadvantaged Farmers program, a program recently transferred to NRCS from FSA. This request is \$4 million over the level appropriated for this activity in 1997. To support the program in 1997, the Department has apportioned an additional \$4.5 million in funding from the Fund for Rural America. These funds will help support our cooperative agreements with 28 entities, including 1890 land grant institutions and Native American community colleges, through which we provide training and management assistance to small or minority farmers and ranchers.

In the watershed planning and construction area, the Department will continue efforts to make the best use of limited resources. Only the most cost effective and environmentally beneficial projects will be funded with an emphasis on non-structural management systems. We will also continue to closely examine approved watershed plans and de-authorize infeasible projects in order to reduce the backlog of unfunded work. Beginning in 1998, technical support for NRCS' watershed planning and construction activities will come from the agency's conservation operations program which will improve overall administrative efficiency. Also, we will try and help sponsors with implementation costs by allowing up to \$15 million to be used to subsidize rates of municipal loans administered by the Rural Utilities Service.

Finally, the Department's 1998 budget continues its support of the 289 authorized Resource Conservation and Development (RC&D) areas. In addition, an increase of \$18 million is requested to fund local, non-Federal watershed coordinators to assist in watershed planning for a wide range of environmental purposes such as the salmon recovery efforts in the Pacific Northwest.

RESEARCH, EDUCATION, AND ECONOMICS

The budget recommendations for the programs administered by the Research, Education, and Economics (REE) mission area agencies reflect the importance of investments in scientific, technological, and economic knowledge for future performance of the agricultural sector in the U.S. economy. Driven by publicly funded re-

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search, agricultural productivity has grown at an annual average rate of 1.8 percent over the past 45 years. There is a critical need to maintain the overall level of scientific and technological expertise to support key Departmental objectives related to expanding agricultural-based economic and trade opportunities; ensuring a healthy, safe, and affordable food supply; and protecting public and private natural resources for the benefit of current and future generations.

The ability of U.S. agriculture to meet the growing worldwide demand for food will require that the research pipeline continue to provide knowledge which will maintain productivity growth, protect the natural resource base, create a safer food supply, and address critical human nutrition needs. Continued support for research and education also will lead to a better understanding of how agricultural production impacts the environment and how effective management practices can be applied to avoid or mitigate harmful effects. Federal support for research conducted in universities and private laboratories encourages these institutions to invest in technology at levels beyond what they would invest on their own. Publicly supported research provides the scientific foundation for and complements much of the work carried out in the private sector.

Current research activities will be further strengthened through the Fund for Rural America. On January 17, 1997, the Department announced plans to allocate \$46.1 million of the \$100 million fund for research, education, and extension activities. Of this \$46.1 million, \$33.3 million will fund projects that address international competitiveness, environmental stewardship, and/or rural community enhancement, and \$12.8 million will be used to address key priorities including livestock concentration, food safety, nutrition, food recovery, and telecommunications. Grants will be awarded on a competitive basis for multi-disciplinary projects.

Total funding requested for REE agencies in 1998 is \$1.8 billion, which is about the same as the 1997 appropriation. Within this total, the Agricultural Research Service (ARS) would receive an increase of \$10 million, about 1.4 percent above the 1997 appropriation. The agency would redirect \$23 million from ongoing research projects to support programs of high national priority.

The budget includes an increase of \$12 million for a new Human Nutrition initiative. Half of the total would support activities carried out at ARS human nutrition research centers which examine the impact of nutrition on health of individuals representing diverse population groups in terms of age and ethnic background. The remainder would fund surveys to collect data on food intake by infants and children which will, in turn, be used by the Department and the Environmental Protection Agency to assess pesticide residue levels and establish tolerances in accordance with the Food Quality Protection Act of 1996. The budget also includes a \$5 million increase for Emerging Diseases and Exotic Pests to control the spread of non-native diseases and pests.

Both ARS and the Cooperative State Research, Education, and Extension Service (CSREES) have important roles in the Administration's food safety initiative. The ARS budget includes an increase of \$4.1 million for pre-harvest food safety research to develop new technologies for detection and control of pathogens and for post-harvest intervention strategies needed to support the HACCP approach used by the Food Safety and Inspection Service.

The CSREES components of the food safety initiative consist of: (1) a \$2 million increase for research focusing on pre-harvest issues related to detection and control of pathogens, and post-harvest issues related to production, processing and handling practices, and (2) an additional \$2 million for education programs related to HACCP implementation, including compliance education, quality assurance, and State food handler certification.

An increase of \$4 million is proposed for ARS pest management research, including support for large scale Integrated Pest Management (IPM) projects, host-plant resistance, and for biological control of plant pests. Other increases are proposed for preservation of plant and microbial genetic resource collections and for development of methods for more efficient management of grazing lands.

ARS also plays an important role in the Administration's initiative to restore the South Florida Everglades ecosystem. The budget includes a \$2 million increase to develop mechanisms to control the spread of invasive *Melaleuca* trees and to conduct research on ways to reduce the environmental impact of agricultural production in the Everglades. An increase of \$4 million for construction of a quarantine facility to house the study of biological control agents is also proposed. Construction of this facility was designated by the Administration's South Florida Ecosystem Task Force as a top priority to ensure prompt restoration of the Everglades National Park and other fragile ecosystems in South Florida.

The budget also includes \$59.3 million for facility construction and modernization projects. An increase of \$23.4 million is proposed for a replacement laboratory in

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Parlier, California, used to conduct horticultural, irrigation, and post-harvest research. Funding in the amount of \$3.2 million is proposed for continued modernization of the agricultural research center at Beltsville, Maryland. Other increases provide support for Federal regional centers, including \$8 million for research carried out by the National Center for Agricultural Utilization Research at Peoria, Illinois, and a total of \$6.3 million for modernization of the Eastern and Southern Regional Research Centers located in Philadelphia, Pennsylvania, and New Orleans, Louisiana. Funds are also recommended for modernization of the National Agricultural Library at Beltsville and for the foreign animal disease facility at Plum Island, New York. An increase is also proposed for construction of new facilities for the European Biological Control Laboratory at Montpellier, France. The mission of this laboratory is to discover, research, and introduce natural enemies of domestic insect pests and weeds.

The budget request for CSREES calls for a reduction of about \$69 million, about 7.6 percent below the 1997 appropriation. Funding for formula programs is held constant at the 1997 appropriated level. An increase of \$36 million is proposed for the National Research Initiative (NRI), the competitive grants program which funds merit-reviewed proposals open to participation by Federal laboratories, public and private universities, and other research entities and individuals. It is especially important that the Federal government support this meritorious program which supports both fundamental and mission-linked research. Estimated returns on research funded through the NRI are among the highest in the portfolio of programs and this work provides technology used by other public and private sector researchers. The budget continues to reflect the Administration's view that the Federal government should not be financing research projects and facility construction activities on university campuses through the Congressional earmarking process. Proposed reductions in these two program areas total over \$100 million.

The budget includes increases for CSREES and other participating agencies to move forward on the IPM initiative. This initiative has the ambitious goal of increasing the adoption of IPM practices to 75 percent of the Nation's crop acreage by the year 2000. Strategies for IPM implementation are based on input from growers, scientists, and other stakeholders who serve on regional and State teams and are involved in program planning and implementation. A proposed increase of about \$13.2 million above the 1997 appropriation for IPM research and education programs will allow us to: (1) support regional IPM development and implementation projects, (2) fund a special grants program devoted to pest management alternatives to replace pest control technologies under consideration for regulatory action by the Environmental Protection Agency (EPA), and (3) fund additional area-wide projects by ARS. We are also requesting a \$5 million increase to support data collection activities for registration of minor-use crop pesticides.

CSREES conducts several relatively small, but important higher education programs to encourage both graduate and undergraduate students to pursue careers in agricultural and food sciences. We are seeking a small increase in support for the highly successful Institution Challenge Grants program and continued funding for the Graduate Fellowships Grants program. Both programs focus on recruiting diverse and talented students and enhancing the quality of education necessary to strengthen the Nation's scientific and professional workforce.

Efforts are made through these programs to reach out to population groups who are under-represented in many agriculture-related fields to enable all young Americans to have opportunities for successful careers in agriculture. The 1890 Capacity Building Grants program, which is funded at the 1997 level, is the cornerstone of the Department's successful partnership with 1890 land grant universities. In the 7 years from 1990 through 1996, over \$60 million has been awarded for 305 research and training projects, each of which features an active, cooperative relationship with one or more USDA agencies. The agency plans to continue supporting construction, renovation, and upgrade of facilities projects at 1890 universities. We have encouraged Departmental agencies to build on partnership relationships with 1890 institutions to establish centers of excellence which are on-campus entities devoted to addressing specific USDA agency tasks. The budget also includes proposals for continued support of Hispanic-serving institutions, and the 1994 Native American institutions.

Finally, CSREES continues to support ongoing extension projects of high national priority and carries out education and technology transfer activities in the areas of food nutrition and education, water quality, and sustainable agriculture. The budget includes an increase for the Children, Youth and Families at Risk program with a specific amount designated for use by the 1890 institutions. A reduction of about \$19 million below the 1997 appropriated level is proposed for several extension pro-

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grams which could potentially be supported with formula funds and State and regional resources.

The Economic Research Service (ERS) is an important source of analytical information on food and agricultural related issues, and the economic and social science research conducted by ERS supports better decisionmaking in both the public and private sector. The budget request for ERS is \$54 million, which includes a modest increase to conduct analysis focusing on the costs and benefits of resource conserving production practices, such as IPM and conservation tillage. This initiative supports our goal of improved harmony between agriculture and the environment. This research would provide information which would help producers make profitable and environmentally conscious choices and help policymakers direct resources to the most cost-effective conservation programs.

Like ERS, the National Agricultural Statistics Service (NASS) is also an important source of information. The estimates and forecasts that NASS produces are used by all participants in the agricultural economy, and NASS has earned and maintained an unmatched reputation for accurate, unbiased, and timely information. In addition, the implementation of the 1996 Act has made reliable and timely information about production, supply and prices even more critical. Within the total budget request of \$120 million for NASS, an increase of \$18.5 million is requested for conducting the Census of Agriculture. The 1998 costs of the Census are higher than any year in the 5-year Census cycle, because it is the year the Census is scheduled to be conducted. Last year, the Census of Agriculture was transferred from the Department of Commerce to USDA. Although USDA received funding through appropriations for the Census in 1997, the authorization legislation to transfer the function has not yet been passed. I urge you to support the swift passage of this legislation.

The Census is the main source of local level data about American agriculture, the only complete enumeration of farmers, and an important benchmark for USDA's current program which uses statistical analysis to produce national and State estimates. The Census of Agriculture is taken every 5 years, and in 1998, USDA will conduct the Census for the first time, expanding significantly its role as an information provider. By changing the way the data are processed, NASS plans to complete the collection and processing of the approximately 2.5 million census report forms in 25 percent less time than the previous agricultural census.

MARKETING AND REGULATORY PROGRAMS

The Marketing and Regulatory Programs contribute to increased domestic and international marketing of U.S. agricultural products by: (1) reducing international trade barriers and assuring that all sanitary and phytosanitary requirements are based on sound science; (2) protecting domestic producers from animal and plant pests and diseases; (3) monitoring markets to assure fair trading practices; (4) promoting competition and efficient marketing; (5) reducing the effects of destructive wildlife; and (6) assuring the well-being of research, exhibition and pet animals. Consumers as well as the agricultural sector benefit from these activities.

Beneficiaries of these services already pay a large percentage of the program costs through user fees. And, we are proposing legislation to recover over \$38 million in new user fees from those who directly benefit from USDA services. New license fees are requested to recover the entire cost of administering the Packers and Stockyards Act. Expanded user fees are requested for developing grain standards, for certain animal and plant inspection activities, and for Federal administrative costs for operating marketing orders and agreements.

The budget includes an increase of \$11 million for the Agricultural Marketing Service (AMS). The 1998 budget includes modest increases for expanding foreign market news reporting and expanded reporting of livestock and poultry markets in accordance with recommendations set forth by the Advisory Committee on Agricultural Concentration. We expect to have a proposed rule to implement the Organic Foods Production Act issued this year. In order to implement the program we are requesting additional funds to accredit organic certifiers. We plan to recover the full cost of the program through user fees. For 1997, the Pesticide Data Program (PDP) was funded through EPA. The Administration believes that funding for PDP within AMS is preferable to funding the program within EPA. AMS is in a unique position to conduct the program in cooperation with State departments of agriculture. It has the agricultural marketing expertise to develop a statistically reliable testing system.

For the Animal and Plant Health Inspection Service (APHIS), the current law budget contains a \$6 million reduction below the 1997 current estimate. This reduction reflects program successes in many pest and disease management programs

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such as the eradication of brucellosis. It assumes increased cost sharing from beneficiaries of Animal Damage Control activities and from cotton producers for eradicating boll weevil. It maintains funding for our important data gathering and risk analysis used in negotiations concerning sanitary and phytosanitary trade barriers and restrictions on genetically engineered products entering world markets. Funding increases are provided for Pest Detection activities such as Karnal bunt and Agricultural Quarantine Inspection at the borders. Finally, this budget proposes to fund architectural and engineering work for a sterile screwworm rearing facility to be built in Panama.

The current law budget proposes \$2.6 million of increased funding to strengthen the Packers and Stockyards programs of the Grain Inspection, Packers and Stockyards Administration (GIPSA). The increased funding will enable GIPSA to address more of the recommendations of the Advisory Committee on Agricultural Concentration. Specifically the agency would: (1) hire additional staff to monitor and analyze packer market competition and implications of structural changes and behavioral practices in the meat packing industry; (2) expand poultry compliance activities; and (3) install electronic filing equipment to reduce financial reporting costs for stockyard owners and packing house operators. Legislation is proposed to authorize a dealer trust similar to that of the existing packer trust. Dealers would be required to establish a trust covering the value of livestock inventory and accounts receivable due from the sale of livestock. This proposed trust would be a valuable tool in assisting the recovery of payments for unpaid sellers.

DEPARTMENTAL MANAGEMENT ACTIVITIES

Reinventing government and reducing costs is one of my major goals for the Department. A great deal has been accomplished already. The Department's reorganization reduced the number of agencies from 43 to 30 and over 13,500 staff years have been eliminated. As a result of these changes and further downsizing, savings of more than \$4.0 billion are projected by 1999 and \$8.0 billion by 2002. Further streamlining and downsizing as well as technological, financial, and administrative improvements are underway and will continue.

Also currently underway in the Department is the implementation of the Government Performance and Results Act of 1993 (GPRA). The agencies and mission areas are in the process of preparing 5-year strategic plans, and a Departmentwide strategic plan is currently in draft form. USDA plans to begin consultations with Congress after the Departmentwide plan is completed and reviewed by OMB. In addition, the explanatory notes for the fiscal year 1998 budget include the mission statements and goals for each agency, as well as performance measures. Currently we are working to refine these performance measures and to develop annual performance plans for next year's budget. A great deal of time and effort has been spent on implementing GPRA, and the process is helping us improve program effectiveness, service quality, and customer satisfaction. We look forward to working with Congress to fully implement GPRA.

In light of existing and proposed reductions of staff and funding for the Farm Service Agency and other county-based agencies we have an urgent need to determine ways to increase efficiency and improve coordination. Therefore, the Department will study the administrative and other functions of the county-based agencies and will re-examine our plans for county office based service centers to identify and examine opportunities for further streamlining of program delivery and administrative support for these agencies.

Several offices are responsible for Departmental management activities. These offices provide leadership and administrative support to USDA agencies and coordinate many of the reinvention efforts in the Department. The 1998 budget provides the resources necessary for these offices to enhance their leadership, coordination, and support activities and as a result, improve the overall delivery of the Department's programs and services.

One of my priorities is to reduce the existing backlog of equal employment opportunity and program discrimination complaint cases in the Department and to improve the systems in place to ensure that the same situation does not recur in the future. In 1997, the Congress increased funding in this area to enable the Department to reduce the backlog and we are working to accomplish that goal. This funding level is maintained in the 1998 budget request to continue these activities. In addition, I have created a civil rights action team to do a thorough audit of USDA civil rights issues and provide me with recommendations for improvement, directed agencies that serve farmers to establish special outreach offices in the field, and personally attended a number of listening sessions across the country to hear the concerns of employees and program participants. I am committed to making positive

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changes at USDA to ensure that both our employees and customers are treated fairly and with dignity.

As required by the Clinger-Cohen Act of 1996, USDA has established an Office of the Chief Information Officer (CIO) to oversee the management of the Department's information technology (IT) resources. This request includes an increase to fully fund the CIO's immediate office. We are funding these activities within available resources this year. However, in order to provide adequate resources to improve the planning, acquisition and management of USDA's IT resources, we believe these funds are necessary to strengthen the CIO's office.

This request includes funds to continue the implementation of the Strategic Space Plan for the Washington Metropolitan area. This plan has been tailored to meet the needs of USDA based on the projected reductions in staff at the Washington Headquarters and to provide a safe efficient work place for our employees. The Beltsville Office Facility is scheduled to be completed by December 1997 and should be ready for occupancy by January 1998. This proposal includes an increase to provide necessary operations and maintenance for the new facility. A contract for the overall concept design of the South Building renovation and specific design for the first phase of construction was awarded in January 1997. We expect to award the contract for the first phase of construction in September 1997. The funds included in this request will be used to continue the renovation effort.

The budget proposes an increase for the central hazardous waste management account. These funds are used to meet requirements of the Comprehensive Environmental Response, Compensation, and Liability Act and the Resource Conservation and Recovery Act. The additional funds will be used to be more aggressive in our efforts to cleanup sites that have been previously identified. Specifically, we will target those projects with the highest risk to public safety and those with overdue compliance deadlines.

An increase is proposed for the Office of the Chief Economist (OCE) for agricultural weather-related services. OCE is responsible for weather monitoring and agriculture related weather analysis and houses the Joint Agricultural Weather Facility, co-staffed by USDA and the Department of Commerce. The funding would provide USDA with the capability to coordinate, implement, and utilize a national agricultural weather and climate data system to expedite decisions at the Federal level affecting agricultural commodity trade and markets, fire weather management and ecosystem conservation. For example, lack of observational data in agricultural areas and a breakdown in the dissemination of forecasts played a significant role in the destruction caused by the recent Florida freeze. The proposed increase would expand the collection of weather and climate data in agricultural areas and result in improved dissemination of observations and forecasts to producers. This would help producers mitigate the adverse impact of weather-related events. In addition, the National Weather Service (NWS) has recently undergone a major restructuring and modernization initiative. Funding is proposed to provide for compatible technology to allow the Department to continue to directly access the NWS data needed to carry out its weather and crop surveillance mission.

Funding is also included for the Commission on 21st Century Production Agriculture. This Commission, established by the 1996 Act, will produce two studies. The first study, due June 1, 1998, will be a comprehensive review of changes in the condition of production agriculture in the U.S. since the date the 1996 Act was enacted and the extent to which the changes are the result of this Act. The second study, due January 1, 2001, will be a comprehensive review of the future of production agriculture in the U.S. and the appropriate role of the Federal government in support of production agriculture. The Commission will be made up of eleven members, selected by the President and the House and Senate Agriculture Committees, who are to be appointed by October 1, 1997.

An increase is proposed to provide the National Appeals Division (NAD) with adequate resources to fulfill its statutory requirements and ensure fair and equitable treatment for USDA program participants. NAD was established to provide an impartial appeals process for adverse program decisions. Financial constraints in fiscal year 1996 as well as reduced funding in 1997 have impeded NAD's ability to obtain needed automated information systems and provide employees with necessary training.

An increase is proposed for the Office of the Inspector General. These funds will be used to enhance the audit and investigative functions of the office by providing funds for additional FERS costs for investigators, additional training, ADP and personnel support. This will support the Department's overall goal of improving the way USDA works.

The Office of the General Counsel (OGC) provides critical legal support and advice to the Department and its agencies. Recent budget austerity has eroded OGC's re-

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sources. An increase necessary to maintain appropriate staffing levels is proposed. This will enable OGC to handle more effectively the expanding number of legal issues confronting the Department, especially those related to trade, food safety, welfare reform, civil rights and the management of the National Forests.

Although the Department has made significant progress in implementing the Chief Financial Officers Act (the CFO Act), much work still needs to be done. An increase is proposed to provide the Office of the Chief Financial Officer with additional resources to facilitate the full implementation of the CFO Act in the Department.

Finally, the budget includes a small increase for the Office of Communications (OC) to conduct an outreach program to bring information about USDA programs to underserved groups through various media sources.

That concludes my statement. I am looking forward to working with the Committee in the months ahead in reviewing these budget proposals as we work to meet our common objectives of serving our customers and controlling Federal spending.

NEW SUBCOMMITTEE MEMBER

Senator COCHRAN. I am very pleased we have such good attendance at our subcommittee this morning. I am going to defer my questions until other members of the subcommittee have had an opportunity to make comments or ask you questions about the budget request. I have to be here this entire hearing. None of them is required to be. So, I am going to defer my questions, and will be happy to do that.

The distinguished ranking member of this subcommittee is the Senator from Arkansas, Senator Bumpers. I want you to know, though, that the former chairman of this committee was the first Senator here at this hearing, and I was going to call on him, assuming you were going to be here as promptly as he was.

Senator BUMPERS. I have never crossed him one time in my life. [Laughter.]

Senator COCHRAN. Senator Byrd is not only a new member of the subcommittee, but he is also a prompt member of the subcommittee, and we want to welcome him. We certainly appreciate his presence and his participation in the work of this subcommittee.

If you have no objection, I would call on him.

Senator BUMPERS. No objection, Mr. Chairman.

Senator COCHRAN. Senator Byrd.

Senator BYRD. Mr. Chairman, as one who believes strongly in the rules with respect to seniority, I am going to say thank you for your deference, your kind deferential treatment, and also a thank you to Senator Bumpers. But I will not run afoul of the rules of seniority. I am going to stay around a while, and I am going to be listening with interest to Senator Bumpers and others who have seniority over me. And I will wait until my turn to make any further comments.

Thank you very much.

Senator COCHRAN. Thank you, Senator Byrd.

Senator Bumpers.

PREPARED STATEMENT

Senator BUMPERS. Mr. Chairman, first of all, I ask unanimous consent my opening statement be inserted in the record.

Senator COCHRAN. Without objection, so ordered.

[The statement follows:]

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PREPARED STATEMENT OF SENATOR BUMPERS

I want to welcome Secretary Glickman, Secretary Rominger, Mr. Collins and Mr. Dewhurst to our subcommittee and I look forward to their statements. I also want to express an additional welcome to our new subcommittee members, Senator Byrd and Senator Leahy. The experience and expertise they bring will be most helpful as we work through the budget difficulties posed by the challenges of increasing demands and declining resources.

Secretary Glickman, by all measures and various reports, the optimism we expressed upon your confirmation as Secretary appear to have been understatements. These have, indeed, been trying times for rural America and for the many men and women who serve at the Department of Agriculture. In spite of the multitude of difficulties you and all of us have faced, you have exhibited unfailing leadership and confidence in executing your duties as Secretary. You have reminded us all that, as President Lincoln declared, USDA is the "Department of the People" and one in which all the people may feel served. Speaking on behalf of the entire subcommittee, I want to thank you for your untiring work and for the accomplishments you have achieved.

To examine the many facets of the Department of Agriculture is to touch upon many of the vital and most basic of services the federal government can provide the American people and, in fact, the people of the world. Few Departments of the federal government can lay claim to the variety of activities that fall under your jurisdiction. Food security and food safety, basic and applied research, natural resources, housing, rural utilities, international trade, and contributions to easing world hunger are all your responsibility.

Above all this, you have the task of educating an ever increasing urban population that the Department of Agriculture is more than a Department of Farmers and, at the same time, remember that without a strong base of agricultural production on the farm, we would all become a nation enslaved by the productive capabilities of our international friends and adversaries. It is a daunting responsibility.

Poultry production and processing is vitally important to the economy of my state. Just one year ago, we were faced with a threat of sanctions by the former Soviet Union that would have deprived us of valuable markets. You went to work, along with other members of the Administration, and overcame that threat. It is now reported that U.S. poultry exports into that country are proceeding without objection. Your actions not only served to protect the jobs of many men and women in Arkansas and other states, they also ensured the availability of high quality products to the Russian people and maintained our nation's position as a strong player in world markets.

Also, one year ago, you were presented the task of implementing a new farm bill, one much different than any farm bill administered by any of your predecessors in recent history. I won't belabor you and my colleagues with another rendition of my view of that legislation, but it presents you, and all of us, tremendous challenges in Departmental management and long term protection for the men and women on the farm who face daily threats of weather, pests, markets, and a host of other factors far beyond their control. Their livelihoods are on the line, and that line will become more and more tenuous in the days that are sure to come when farm prices tumble without a viable safety net to see them through. If farm security in the form of income and price support is a thing of the past, then it must be replaced by a security in the form of increased research, market development, and risk management. We have a long way to go and, perhaps, not long to get there.

The Department of Agriculture was created during a period of our history immersed in deep conflict and prone to intense introspection. One hundred years later, the Department had grown into a massive network connecting all parts of the nation, at the local level, where service delivery to a still largely rural population was the touchstone of efficiency. Now, introspection is renewed and your unenviable task is to revitalize a new touchstone of efficiency with a minimum of conflict. Modern communication, transportation, and other technologies have changed the face of service delivery challenges as much as similar changes have altered the face of agricultural production itself.

Still, we must remember that quality service must be maintained and common sense approaches must be evaluated before disruptive changes are thrust upon an unwary rural population. Your action of recent days to calm the concerns of USDA and county employees that sudden and arbitrary changes will not occur will prove to benefit us all. However the face of agriculture may appear in the 21st Century, we must ensure a legacy adequate to meet the demands of farmers, ranchers, and the ultimate consumers of their products. At this juncture of another agricultural revolution, one born of innovative research, environmental protection, and a global

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marketplace, history would not judge well any imprudent dismantling of the very means by which we have become the envy of the world.

As we turn to the task immediately before us, I am sure that there will be some areas in which we will find disagreement. But on the whole, I feel that we all want to meet at the same destination. We must allow our farmers the tools necessary to feed an ever hungry nation and world. We can't allow the strongest nation on earth to be home to an undernourished and under served population. Our food must be safe and our science sound. Our nation is and has always been blessed with the inventive genius to take us into the next highest plain of achievement. The tools are before us, all of us, and our charge is to manage them wisely.

RESEARCH ON GENETIC ENGINEERING

Senator BUMPERS. Second, I only have a couple of questions of the Secretary.

And the first one, Mr. Secretary, is: Does the Department of Agriculture have any ongoing research on genetic engineering, such as we have just seen come out of Scotland?

Secretary GLICKMAN. I am confident that we have a lot of biotechnology research going on. And much of that is related to genetic modifications. But I am not aware of any cloning research. I know that there obviously has been over the years embryonic research in terms of the development of stronger animals and more disease-resistant animals. We do genomapping for livestock. We are not doing the research to produce cloned animals.

Senator BUMPERS. Is genomapping similar to the Human Genome Project that we have at NIH?

Secretary GLICKMAN. I think so, yes.

USER FEE PROPOSAL

Senator BUMPERS. Second, Mr. Secretary, the fees that you have mentioned for the Food Service and Inspection Service, I think you told me in the office the other day that the fee is \$590 million—is that what you are asking for?

Secretary GLICKMAN. Well, \$390 million in fees, which is about 70 percent of FSIS's total budget. The rest of it would be under our budget through the general nonfee dollars.

Senator BUMPERS. So you are asking \$390 million?

Secretary GLICKMAN. \$390 million in fees, which is in-plant inspection and the other 30 percent is for research and supervision and overhead and a lot of the other functions of that part of the Department.

Senator BUMPERS. I think you told me in the office the other day that represents roughly one-half cent a pound?

Secretary GLICKMAN. If the full \$390 million were paid for by in-plant fees, we estimate about one-half cent a pound is what that would cost.

Senator BUMPERS. Of both meat and poultry?

Secretary GLICKMAN. That is correct.

Senator BUMPERS. Would you anticipate that that would be passed on to the consumers in higher prices for the goods and products?

Secretary GLICKMAN. I would honestly say that I would expect much of it to be passed on. I cannot tell you what the competitive conditions are out there. But we want to see the meat and poultry inspection program adequately financed. If we can figure out another way to do it without the fees, obviously we would. We are not

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hung up on the fees, but my concern is, given the tightness of the budget, that the integrity and safety of the meat and poultry supply is paramount. That is why we thought, if we cannot find it somewhere, then we have got to go with the fees.

HACCP

Senator BUMPERS. Is the so-called HACCP, which is an acronym, H-A-C-C-P. How far along are we on that inspection program in the meat and poultry business?

Secretary GLICKMAN. Well, our final rules were approved this past summer. We are starting with E. coli testing which just began. There is a whole process to go through. But this process will take about 3 years to complete.

A lot of the plants, larger plants, particularly, are already operating with HACCP right now. It is the medium-sized and smaller plants that will take a little longer to complete. But, I would say about 3 years.

Right now, at the end of this fiscal year, we estimate that about 75 percent of the pounds slaughtered, both meat and poultry, will be under the HACCP inspection system. And in fiscal year 1999, it is going to be 95 percent. In the year 2000, it will be complete.

Senator BUMPERS. Can you tell us what magnitude of improvement that is over the present system? For example, take the poultry industry, which, as you know, is extremely important in my State. What percentage of the poultry that comes off the assembly line has any kind of bacteria on it, do you know, under the present inspection system?

Secretary GLICKMAN. In the case of poultry, it is probably higher than in the case of beef, just because of the nature of how chickens are produced.

Senator BUMPERS. Really, the question—

Secretary GLICKMAN. Yes; just because there may be a higher incidence of some bacteria does not necessarily mean that the product is not clean or safe or that any problem cannot be eliminated when the product is cooked.

Senator BUMPERS. I am saying so far as the inspection is concerned, I am on your team. Of course, I have always maintained that nobody stands to benefit more from a perfect inspection system than the industry itself. Because every time there is any kind of an outbreak, they suffer in sales and revenues.

All I was trying to do was to ask you if you knew, for example, if 30 to 60 percent of the poultry today has some E. coli or something else on it? My question is, Would that be reduced to 10 percent under the new inspection system?

Secretary GLICKMAN. It would be reduced. I cannot tell you what levels. I would have to get you that information. But the reductions in levels of Salmonella and other pathogens would be reduced. In fact, most of the companies who are doing it now agree that the system provides a better method to test at various points of the slaughter process, so that inspection would not just be by sight. You would be able to test for the pathogens at various points. So there is a quantifiable improvement expected.

Senator BUMPERS. Mr. Dewhurst, did you have a comment on that?

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Mr. DEWHURST. I was just thinking, we did publish an impact statement when we put out the final rule on HACCP, and it has some estimates in it. I just do not remember what those were. But we'll give you all that information.

[The information follows:]

ECONOMIC IMPACT ANALYSIS

The Food Safety and Inspection Service has determined that the implementation of Hazard Analysis and Critical Control Point (HACCP) systems with pathogen reduction performance standards in meat and poultry plants will substantially reduce the incidence of pathogens that can cause foodborne illness.

FSIS conducted a final Regulatory Impact Analysis on implementation of the new HACCP-based regulatory program for inspected establishments. The regulatory impact analysis concluded that the final rule has potential annual public health benefits of \$990 million to \$3.7 billion because of reduced foodborne illness costs such as medical care and lost worktime.

FSIS is publishing the final Regulatory Impact Analysis along with the final rule.

Over a four-year period, the estimated cost to the meat and poultry industry for developing, implementing and operating the proposed pathogen reduction and HACCP systems is estimated at \$305 to \$357 million, averaging \$76 to \$89 million per year, or slightly more than one-tenth of a cent per pound of meat and poultry.

This is significantly lower than the annual estimated cost of implementing the proposed rule, which was about \$244.5 million per year, or slightly more than 2/10 of a cent per pound of meat and poultry.

The recurring cost after full implementation of the pathogen reduction and HACCP systems is estimated at \$99.6 to \$119.8 million per year.

The rule has been developed to minimize the economic impact on small and very small plants. Small plants are those with 500 or fewer employees, the Small Business Administration's size standard for small meat and poultry manufacturing establishments. In addition, FSIS has designated establishments "very small" if they have fewer than 10 employees or annual sales of less than \$2.5 million.

Of the 6,200 USDA-inspected slaughter, processing, and combination slaughter and processing plants, over 2,900 (or 48 percent) are considered small plants and another 2,900 are considered very small plants.

The nearly 2,900 state-inspected plants—all assumed to be very small plants—will also be required to implement the pathogen reduction and HACCP requirements.

FSIS is allowing small and very small federal and state plants additional time to meet the new HACCP requirement and the *Salmonella* performance standard, thus minimizing the economic burden. Small plants have 30 months to implement HACCP systems and meet pathogen reduction performance standards. Very small plants have 42 months. All plants, regardless of size, will implement sanitation standard operating procedures and *E. coli* testing requirements at the same time, six months after publication of the final rule.

The frequency of mandatory microbial testing by slaughter plants for generic *E. coli* will be based on production volume. Slaughter establishments with lower production volume will have reduced sampling requirements, thereby reducing the burden on small businesses.

Of the 2,700 federal and state slaughter facilities, over 78 percent (the small and very small plants) will be required to conduct *E. coli* testing for only a specific period each year as long as they can demonstrate compliance with the established criteria. This will further reduce the burden for smaller slaughter operations.

Plants that now have good processing controls are expected to have relatively few implementation costs to comply with the proposal. Plants with little or no process controls would need to invest more to comply.

HONEY PROGRAM

Senator BUMPERS. Mr. Chairman, I had three or four other questions. I just want to close with this one question. When I was running for reelection in 1992, I was in Hot Springs, and I went to the courthouse. And there was a long line—I would say a 200-yard line—of people who were waiting for absentee ballots. So I started shaking hands. [Laughter.]

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And I got down about halfway through that line, and this young couple there—this very attractive young woman, about 30 years old, said, Senator Bumpers, I just want to know one thing: How do you stand on the honey program? Now, Arkansas is not noted as a honey-producing State, and I thought that was a really strange question. That was her only concern.

And obviously she had either heard Rush Limbaugh or some other news program, news magazine, talking about what a rip-off the honey system was, which I think at that time was costing us roughly \$30 million a year. Does that sound about right, Mr. Dewhurst?

Mr. DEWHURST. Yes, sir.

Senator BUMPERS. So I tried to get her the best information I had about the importance of the honey program. And she said, well, I can see I am not going to be able to vote for you. Now, I think—I am not sure, and I had not researched it—I think I may have voted 4 years later to eliminate that program.

And I want to publicly apologize for having done so, because I think it was a mistake, and I said it on the floor at the time, that oftentimes these programs that are targeted by the news magazines or the talk show hosts about how your money is spent—that ABC program, periodically, you know, “It is Your Money, Your Choice,” or some such thing as that—they can make those programs look terrible. But the truth of the matter is, bees pollinate 25 percent of all the crops in this country. And I am told that this is becoming a very critical problem.

I am also told by beekeepers that the number of beekeepers in this country is declining dramatically. In my home county, 5 years ago, we had nine; now we have one. And in New England, where they use a lot of honey hives to pollinate crops, they cannot get them anymore at any price. And when I think about the possible loss of \$5 billion in agricultural products to save \$30 million, that is not a good deal for the taxpayers or us or anybody else.

And I wanted to ask you if you can tell me if you have done any studies as to what the impact of eliminating the honey program has been?

Secretary GLICKMAN. Well, first of all, let me say, Senator, that I voted the same way as you did. I also have qualms about the impact on pollination and protection of the development of basic species of plants because of it.

Our research people are looking at it right now. I am not in a position to tell you whether we are going to recommend reestablishing a program at this stage. But there are real worries out there about this.

Senator BUMPERS. Mr. Secretary, our beekeepers cannot compete with Romania and South American countries, where most of our honey is coming from today. So I am simply saying I hope you will look very seriously at this, because I think it may turn out to be one of the most beneficial programs for the money in our whole Agriculture Department.

Secretary GLICKMAN. Our Agricultural Research Service is looking at that. There is a parasite that is killing bees out there as well, which is compounding the problem.

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Senator BUMPERS. Yes; they tell me—for example, I have a good friend who is a beekeeper in my hometown. He had nine hives. He is down to three. And he says the life of those hives used to be 3 years and now it is down to about 1½ years.

Secretary GLICKMAN. I remember this debate on the House floor. And there was an extraordinarily eloquent Congressman who has since passed away, named Silvio Conte. And he was a wonderful man. And he made a rhetorical career out of this issue, talking about how it was stinging the American taxpayers. But you are correct. Sometimes one's point of view is not necessarily compatible with all the truth. And I fell victim to that myself.

Senator BUMPERS. It is a small item, but in my opinion, it is a very big item, too.

Thank you, Mr. Chairman.

Senator COCHRAN. Thank you, Senator Bumpers.

Senator Byrd.

Senator BYRD. Thank you, Mr. Chairman.

And thank you, Mr. Secretary. Thank you, Senator Bumpers. I will just make a statement, and perhaps ask one question.

As a representative from the State of West Virginia, I know firsthand the challenges confronting rural America and the small family farm.

And incidentally, I wish every boy and girl in this country had an opportunity to live on a small family farm. I had that experience when I was a boy. And it forever shaped my attitudes and outlooks on life. And a great amount of my self-discipline, which I try to exercise today comes from the days when I was on that small family farm, back in the days of the 2-cent stamp and the penny postcard, no running water in the house, no electricity in the house. And I am very sympathetic to the problems of the small family farm.

If we read about the ancient Romans, we will find that the primary manpower resource came from the farmers in the Apennine Mountains. And during the latifundia, the purchasing of the small farms by senators and others in ancient Rome developed. The small farmers who left the farms, migrated into the cities, where there was crime, and they contributed to the growing welfare mobs. And we can pretty much trace the downfall of Rome from the year 133 B.C., when Tiberius Sempronius Gracchus, one of the Gracchi brothers, became a tribune, and promoted the distribution of lands and agrarian programs which would help to draw these people back to the farms.

We can take a great lesson from that. And if we note the history of ancient Rome, we will see a lot of parallels between that government and the ancient Romans and our early Americans of the 18th and 19th centuries. We have seen this happen in our own country as well. And we ought to take a lesson from what happened in ancient Rome, as the small family farmer left the farm and migrated into the towns.

The U.S. Department of Agriculture, the People's Department, it was called by President Lincoln, is an agency that provides meaningful benefits to rural States. And while I believe that all seven of the agency's mission areas merit recognition, I would like just briefly to touch on a few programs that are important to West Virginia. And I begin with the USDA's Rural Development Program,

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which provides assistance to one of my longstanding priorities: the implementation and maintenance of basic community infrastructure such as water and wastewater systems, through its Rural Utility Service Program.

While most Americans assume that when they turn on the faucet, clean, safe water will flow out, in West Virginia, 176,000 families live without an adequate supply of safe drinking water. And the estimated cost of needed water development projects in the State exceeds one-half of a billion dollars.

I applaud the USDA's efforts to alleviate this problem. Last year, under the capable leadership of Bobby Lewis, the West Virginia Rural Development State Director, the USDA made available the necessary resources to fund projects that will provide hundreds of West Virginians with access to a reliable source of clean drinking water for the first time. And much work remains, but I strongly support funding for the water and wastewater account.

Other programs under Rural Development, such as grants and loans for housing and community development, have also contributed to rural revitalization efforts in the State.

I took a trip in 1955, Mr. Chairman, as a member of the House Foreign Affairs Committee. And I was gone—we went around the world in an old Constellation. We spent 68 days on that trip, which, in these days, would have brought forth a number of investigators I suppose. [Laughter.]

NATIONAL CENTER FOR COOL AND COLD WATER AQUACULTURE

But I was greatly impressed when I visited particularly Asian countries—India and the Far East—at the dearth of sanitation and sanitary water and waste facilities. And I learned a great deal on that trip, and I have many pleasant memories. But one of the most pleasant memories I have is that of being able to go to a water faucet back home, when I returned to the United States, and I was able to turn on the water and drink it—turn the faucet on and drink the water without fear of becoming ill.

And we have a lot of people in West Virginia right today—and I would imagine in your State, Mr. Chairman, and other rural States—that do not have the luxury of clean drinking water. So I point to these unique needs of West Virginia, as to rural farmers, out. West Virginia farmers are hard-working family operators. It is my opinion that small and part-time businesses, such as West Virginia farm operations, represent the backbone of our Nation's economy and spirit of community.

I have been disappointed in the distribution to West Virginia of program benefits administered under the Farm Service Agency, the Agricultural Research Service, and the Cooperative State Research, Education and Extension Service to West Virginia. While limited benefits have been brought to West Virginia from these programs, they have been generally due to this subcommittee's attention to the worth of the small family farmer. And I appreciate the subcommittee's efforts.

I have only one quick illustration of an ARS project that this subcommittee made possible that has already had a valuable economic impact on West Virginia, although the facility has yet to be constructed. And I refer to the National Center for Cool and Cold

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Water Aquaculture. All leading sources of data now confirm that aquaculture production will create hundreds of jobs and generate millions of dollars in the State. And the development of this industry is a State government priority.

Many reports, further, suggest that abandoned mine sites can be used for aquaculture, with impressive economic results. Already, West Virginia, Mr. Secretary, boasts 40-plus active aquaculture producers, with increased activity expected this year. And so I thank the subcommittee for its vision, particularly the chairman and the ranking member.

I shall ask only one question, and with your permission and the permission of the subcommittee, submit others for the record, Mr. Chairman.

NATIONAL CENTER FOR COOL AND COLD WATER AQUACULTURE

That question would be with reference to the National Center for Cool and Cold Water Aquaculture, what actions, Mr. Secretary, will the USDA take to expand cool and cold water aquaculture opportunities in West Virginia?

Secretary GLICKMAN. First of all, Senator, we believe this is a very important project, that can have great positive impact on the development of an industry, which is still pretty much at a pretty elementary stage in terms of being able to produce farm-raised fish in cool and cold water environments. We see more in warm water environments.

And of course, Senator Cochran's own State is one of the leading aquaculture States in the country as it relates to catfish. That is an industry that, frankly, has grown like wildfire in the last 10 years. I visited a few of the facilities when I was down in Mississippi, and it is a remarkable thing.

We have a letter that is ready to go to you that defines the progress in this area. An architectural and engineering firm was selected in November of 1996 to design the facilities. And developing design concepts to accommodate specific facility needs will be initiated by March 31, 1997. That design process was mandated by Federal law.

We anticipate approval of the final design and plans by September 30, 1998. Pending the appropriation of full construction funding, a construction contract could be awarded in the last quarter of calendar year 1998. To expedite the ongoing design process, we have negotiated a reimbursable agreement with the Department of the Interior's Biological Service, which will allow a senior aquaculture scientist, with substantial aquaculture experience, to be detailed to assist us in moving this process forward as fast as we can.

To date, \$7.9 million has been appropriated for the project, \$6 million for construction and \$1.9 million for planning and design. An additional \$4.1 million of construction funds are required, for a total of \$12 million. Eighteen months is typically required for construction of this site. So it may not be absolutely required that the additional funds be in this appropriation, but it will have to be in the next appropriation for sure to accomplish that.

Reading from my staff's report, a staff research facility to address cool and cold water aquaculture production could be operational as early as early in the year 2000. I would just tell you that

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this is a high-priority project. We will see what we can try to do to accelerate it and expedite it any where we can. But we are moving on it.

Senator BYRD. Mr. Chairman, I thank the Secretary for the attention and the interest that he and the Department are giving to this very important matter, as far as we are concerned in West Virginia. I also thank the chairman for the assistance that he has rendered to us in West Virginia in this regard.

I close by referring to another trip that I took, which was not a junket, by the way. [Laughter.]

The chairman and I had the great privilege of visiting the old city of Ephesus, where Paul the Apostle walked the streets before we arrived there, as did Hannibal and Publius Cornelius Scipio Africanus Major. Scipio defeated Hannibal at the Battle of Zama in the year 202 B.C. And Hannibal eventually had to flee from Carthage to escape the tentacles of the Roman government, which continued to reach out, which sought to finally lay its hands on this great Carthaginian general. And he was with Scipio one day in Ephesus.

And as I say, Scipio had defeated Hannibal, who, by the way, Napoleon said was the greatest general of antiquity. In my book, I am not judge of who was the greatest general, but I have read a lot about Hannibal. And in my book, he is the greatest general also in antiquity and maybe down to more recent times.

But Scipio asked Hannibal who the three greatest generals of all time were. And Hannibal said that Alexander and Pyrrhus, who defeated the Romans at the Battle of Heraclea, in Asculum, in 280 B.C.—he used elephants for the first time—Pyrrhus used elephants for the first time on that peninsula. It was the first time that the Romans had ever seen elephants.

But Hannibal, to make a long story short, said the three greatest generals of all times were Pyrrhus, Alexander—no—yes—Pyrrhus, Alexander, and himself, Hannibal. And Scipio Africanus said, where would you rank yourself if I had not defeated you at Zama? And Hannibal then said, I would have been first. I would have been No. 1. But because you won that battle, I rate myself as No. 3.

Of course, Hannibal went ahead to commit suicide in 183 B.C. The Romans surrounded the compound in which he had taken refuge. One of his servants told him that the Romans were out there, looking around. And he said, well, go to the windows and make sure they are on all sides. And they reported back that they were indeed on all sides.

He made his way into a subterranean cavern and he always carried a little poison in a ring. So when the Romans finally broke into the compound and found Hannibal, lo and behold, he had foiled them once again. They did not take him alive.

Thank you.

Senator COCHRAN. Thank you, Senator Byrd.

Senator Kohl.

PREPARED STATEMENT

Senator KOHL. Thank you very much, Mr. Chairman. I have an opening statement that I would like to have inserted in the record.

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Senator COCHRAN. Without objection, it is so ordered.

[The statement follows:]

PREPARED STATEMENT OF SENATOR KOHL

Mr. Secretary: I appreciate your willingness to testify before this subcommittee today on the issue of the USDA's fiscal year 1998 budget submittal.

You have had a very big task over the past year as you undertake the hard and thankless job of implementing the significant program changes mandated by the 1996 farm bill. And for many of these changes, implementation is still in process.

Of particular importance to my state are the dairy reforms that are underway. Most important is the reform of milk marketing order reform process, which will not be fully implemented until 1999. I believe USDA has at its disposal the tools necessary to modernize this system, to make it more economically credible and equitable to all producers in all regions. As you are well aware, I feel strongly that USDA should use this opportunity to make the changes that are needed, instead of bowing to the significant political pressure against change, as so many previous Secretaries have done.

Unfortunately, since passage of the farm bill, dairy farmers across the nation have experienced a disastrous decline in prices. This past fall, prices fell by more than 25 percent in a period of 3 months, and prices remain relatively low today.

In response, you have taken a number of actions to help stabilize prices, and I applaud those efforts. I believe your willingness to increase the use of dairy products in USDA programs such as the School Lunch Program, the Commodity Supplemental Food Program, and the Dairy Export Incentive Program has helped bolster prices.

And your responsiveness on the issue of National Cheese Exchange reform is much appreciated as well. The flaws of the National Cheese Exchange and the market's inappropriate influence on farmers' milk checks, has been one factor contributing to the price volatility that farmers have experienced in recent years. Cheese Exchange reform is not a panacea for fixing the problems experienced by family dairy farmers. But any reform of the national milk pricing system must also include a more credible system for price discovery, and I appreciate your efforts, Mr. Secretary, on that matter.

And at the appropriate time, I will have a few questions for you about some of these issues.

NATIONAL CHEESE EXCHANGE

Senator KOHL. And, Mr. Secretary, we welcome you here today. I have three areas that I would like to cover with you. The first is with reference to the National Cheese Exchange.

Secretary GLICKMAN. Yes.

Senator KOHL. Last year, Mr. Secretary, when you testified before the subcommittee, we discussed concerns about the flaws of the National Cheese Exchange. As you know, Mr. Secretary, research funded by this subcommittee and conducted at the University of Wisconsin in Madison, highlighted the market failures of the National Cheese Exchange.

As you know, although less than 2 percent of all the cheese sold in the Nation is traded on the National Cheese Exchange, nevertheless, the price determined on the National Cheese Exchange in Green Bay acts as a reference price for almost all the commercial bulk sales of cheese in the country. And that is also used as a very important determinant by the USDA in setting milk prices paid to farmers.

Now, that exchange is very thinly traded. And as a result, no one has complete confidence in the prices that are determined on that exchange. And yet, as I said, these prices are used in a very important way with respect to both cheese and milk prices throughout our country. Now, you have worked on this, and I know you are greatly concerned about it. And I appreciate that concern. And you

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have been very helpful in coming forward with a proposal to delink the National Cheese Exchange from the USDA's calculations.

Last year I asked you to put together some proposals on alternative price discovery mechanisms. And I know that there are many proposals currently being considered in this regard. Mr. Secretary, if the USDA decides to delink the basic formula price from the National Cheese Exchange, what viable alternatives do you see to take their place?

Secretary GLICKMAN. Thank you, Senator Kohl. First of all, I want to thank you. You have led the way to get us to evaluate and reevaluate this process by which we rely on the National Cheese Exchange to determine the price of cheese, which is a big component of the price of milk and the basic formula price. You are correct, we are looking for options to remove that process. Because we believe that delinking that very thin method of determining cheese prices is important to give dairy farmers and others who use these markets some confidence that there is some viability to how the prices are set.

Now, I would say a couple of things, then I would ask Mr. Collins, our Chief Economist, to comment.

We have been receiving comments since 6 weeks or so ago, frankly, a lot of this effort was due to your pressure and Senator Feingold and Senator Specter and others, but you have been talking about this with me for about a year now. So we said we have got to find a process other than the Cheese Exchange. So we have been receiving comments since the end of January, in response to your request.

We have had about 80 so far. And the comments have been geared to what substitute methods are there out there, or what should we do internally if there are no substitute methods, whether it might be the futures market, which, as of today, does not really exist. There may be some desire to use such alternatives.

We have left the record open for about another 30 days to let people have some additional time to comment and then we are going to terminate that record. We then hope to have enough information to make some decisions as to what it ought to be.

But I would like Mr. Collins to comment specifically. And while I have not evaluated those comments yet, maybe he could talk a little bit about the general character of what those comments have been.

NATIONAL CHEESE EXCHANGE

Mr. COLLINS. Sure, Mr. Secretary, I would be happy to.

Senator Kohl, under milk marketing orders, our main goal is to value milk at its lowest valued use. That is what the basic formula price is. To do that, we really have two choices. We can value milk by looking at milk prices themselves, which we used to, or we can value milk looking at product prices, which is what we do now. Cheese, of course, is one of those product prices.

So basically, the alternatives before us, and the alternatives that are being suggested in the comment period, are for us to go back and value milk on a survey of processors by asking them what they pay for milk, or to find a replacement for the Cheese Exchange price. The difficulty is, of course, there is only one organized cash

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market for cheese in the United States. That cash market is the National Cheese Exchange. That is the only place where a cheese price is discovered in any formal way. And, that is the market that is under attack.

People would have us, as alternatives, go out and come up with some kind of survey of transactions that take place off the exchange. Most of the data we have suggest that those prices are based on the prices on the exchange. So it is not clear that we are going to get new information by surveying off-exchange prices.

Another alternative is simply to help foster the demise of the National Cheese Exchange, and replace it with a successor exchange. That process is underway, and is something the Department has been involved with also. We have been assisting any exchange that wants to start a new cash market for cheese. In particular, we provided some assistance to the Coffee, Sugar, and Cocoa Exchange in that regard.

So those are sort of the general range of options that we are looking at right now. As the Secretary said, comments have been pouring in. We have had about 80 comments so far in the last 2 weeks, and we are evaluating those. I am sure, until this comment period closes on March 31, we are going to get a lot more.

Secretary GLICKMAN. What I would like to do is, once we get a summary of those comments, then I would like to be able to come back to you and run through the kind of general options that are there, to determine whether these are the kinds of things that we can make or should use to make a decision whether to go back to computing milk based upon processed milk or go to the product value, which is cheese, which we are doing right now. However, we really need to get off this reliance on the Cheese Exchange. There is universal agreement on that.

Senator KOHL. That is good. Do I hear you saying that there is an agreement that we have to come up with an alternative price discovery mechanism, that you are hard at work in this process, and that by the end of March you are going to close the comment period and, very shortly thereafter, we are going to really get to trying to put in place an alternative price discovery mechanism?

Secretary GLICKMAN. I think that is a fair statement.

I would tell you that what I would like to do is, after the comment period, sit down with you and go over the general option areas available to us—they probably all have pluses and minuses to them—and talk about whether we have all the authorities that we need to do what we need to do or whether we need additional legislative authorities or not.

MILK MARKETING ORDER REFORM

Senator KOHL. OK, good. On milk marketing order reform, Mr. Secretary, I appreciate your comments about the Cheese Exchange. But let us not forget that one of the most important things, is the larger reform process underway—and that is milk marketing order reform. You and I have had many conversations, Mr. Secretary, about the outmoded and the inequitable nature of the current system. You have made many public statements, which I appreciate, including the comments that you made before this subcommittee last year, which I appreciate.

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Secretary GLICKMAN. Others remember those same comments, too, who do not appreciate them. [Laughter.]

Senator KOHL. I understand. But I appreciate them.

And you suggested that you agree with the assessment that we have to do something about the current pricing system.

As you know, we have many opinions about the issue represented on this subcommittee, and I fully respect the need of all Senators to represent the needs of farmers in their State. It is my hope that as you go through your reform process, you will find a way to find a system that is economically credible and fair to all producers. Ultimately, if the milk marketing system is going to have any future, it must reflect the modern realities of dairy markets, and it must be equitable.

In my mind, that means not only order consolidation, but also significant reform in the class I differential price structure, which has to take place if we are really going to have some kind of reform that is truly deserving of that name. In this context, we have been expecting a new discussion draft from the USDA regarding milk pricing and the milk pricing system. Could you tell us today when you expect to release that document to us?

Secretary GLICKMAN. I would ask, Mr. Collins, if you know generally, timewise?

Mr. COLLINS. We are very close. We have a draft document that is complete. It is in its final stages of review. I would almost say imminently, in the near future, we should have that out.

Secretary GLICKMAN. I have personally been a little concerned that we have not had enough of what I call serious options come from various parts of the country, various parts of the industry, as part of this process. What people are finding is this a tough nut to crack. So I get a lot of folks who are upset about the current system. But then when we say, OK, help us devise an alternative or modification that needs to take place, it is tougher to get that, even from the academic side of the equation. We have got some. It is coming; however, it is slower than I would like to see.

Senator KOHL. By the same token, imminently, you are going to have some serious proposals for us?

Secretary GLICKMAN. That is correct. Yes; we have got to get them out. And then, if they are going to be attacked or they are going to be challenged and improved or modified, we have got to get them out quickly.

RISK MANAGEMENT FOR DAIRY FARMERS

Senator KOHL. OK. Last, I would like to talk about risk management for dairy farmers.

In your testimony, you discuss efforts underway to help farmers manage risk. Given the rapid deregulation of agricultural markets as a result of the 1996 farm bill, and price volatility that is inevitably going to result, risk management, as we know, is a necessity. Most of the rhetoric that I have heard about risk management has been focused on the needs of crop farmers, with little discussion, Mr. Secretary, of the risk management also for livestock producers.

This past fall, dairy farmers saw their prices decline by over 25 percent in 3 months. And beef prices have also been very volatile in recent years. That sort of volatility makes it harder for the aver-

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age livestock producer to stay in business unless they have greater opportunities to manage the price risk.

So I would like to ask you, Mr. Secretary, what is the USDA doing to help livestock producers weather the storms of price volatility?

Secretary GLICKMAN. It is kind of interesting, the first time I saw the Washington Post comment since the farm bill was on dairy price volatility. I do not know if you saw that editorial. But it recognizes that we are in a much more risk-oriented environment now, generally speaking, in agriculture, as a result of the last farm bill.

There is no question that the focus has been on the crop side. In expanding this pilot program nationwide for revenue insurance, it has been on the crop side. However, we do have a couple of things—and I would again ask Mr. Collins to comment on this. One is the proposed options pilot program for milk. That has been submitted to the Department. We have not acted on it yet.

The whole area of agriculture options, as you know, over the years, has had a lot of speculative concerns about it. So whether it is in options for grains or options for milk, it is one that, since there is no futures market in milk products to speak of, it is one we are looking at. And perhaps Mr. Collins would comment on that.

The other thing is, as a part of our efforts on livestock concentration and the concerns about it, we have created a lot of new mechanisms on new market information for livestock. Some of those are out there already including more frequent reporting of prices of livestock, both cows as well as other farm animals. And a lot of your producers are already taking advantage of some of this increased market reporting information, much more frequent information, information on imports and exports across the borders.

Now, again, this is in the animal area, not in the raw product area. Keith, do you have any other comments? It is a very legitimate concern, in terms of how we deal with the issue of risk.

Mr. COLLINS. In dealing with risk, we really want to focus on two areas, financial management of farm business operations and marketing management of the product. We have a statutory requirement from the 1996 farm bill to run a risk management education program. There is a small amount of money in our budget to fund that effort. We have already begun that effort. The Risk Management Agency [RMA], as you know, focuses, as the Secretary said, on crops and crop insurance.

Secretary GLICKMAN. Although, if I might add, crop insurance for feed does provide some protection for the dairy producer. Because the feed costs have been a big part of the cash flow problem there.

RISK MANAGEMENT FOR DAIRY FARMERS

Mr. COLLINS. This risk management education initiative that we will run will also include livestock and dairy. It is going to be broader than just crops. It will involve developing packages of information to cover both financial management, as well as, marketing management; and, communicating that to producers to help them identify, prioritize, and deal with their risks.

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We also, as the Secretary said, have received from the Coffee, Sugar, and Cocoa Exchange a proposal for an Options Pilot Program for dairy producers. I would point out that the 1996 farm bill limits our ability to use the Options Pilot Program the way we did in the past. Such programs now have to be essentially budget-neutral, whereas in the past, we used CCC funding to fund those programs. Therefore, we are having some difficulty in studying the proposal from the Coffee, Sugar, and Cocoa Exchange; but, we are going to try to work with them and see what can be done in that area.

As you may know, there are a couple of dairy co-ops in the United States that are running programs that allow producers to hedge and use futures markets through their co-ops. I think, in fact, there are only two such co-ops that do that. And we would like to see those kinds of activities become more broadly developed, so that futures markets for dairy products do become much more viable than they currently are.

Senator KOHL. Well, I thank you. And I appreciate your sensitivity and your concern about this issue and this problem and your determination to try and do something about it to bring some stability, over and above what exists today, to livestock producers.

I also want to say, Mr. Secretary, that I am very impressed with the efforts that you have made thus far to understand and recognize and the determination you have shown about trying to do something with respect to the pricing system on milk. I know it has been done at some peril with respect to yourself and some of the criticism that you have received, but I think you really are determined to find some equity in this situation. And we understand equity is not all black and white.

And I have said across the State of Wisconsin that of all the Secretaries I have worked with, none has been, in my opinion, more determined to be forthcoming and decisive and to get something done. And across the State of Wisconsin, because of the comments that I have made, there are great expectations—

Secretary GLICKMAN. I knew that was coming. [Laughter.]

Senator KOHL. For what we hope that you can achieve. And for that, I want to say that I appreciate your efforts, and I am looking forward to getting something done, working with you.

Secretary GLICKMAN. Senator, obviously, you have had a great deal to do with inspiring my interest, as has Senator Leahy and others, as well. I think, philosophically, this is a very important issue for us. Because it relates to the viability of small-and medium-sized producers generally. It is not just in dairy. As you know, these trends toward fewer producers and more larger producers is almost in all segments of American agriculture.

Quite frankly, I do not think we in USDA, over the years, have given a lot of attention to the changing structure of agriculture. I am not saying that we fight the nature forces of the economy and economic trends. To the extent that we can kind of be a constructive, positive force in helping small-and medium-sized agriculture stay in business, that ought to be one of our prime focuses.

And that is not just in dairy. It is in the row crops and other commodities as well. And the markets are sometimes cruel. And Congress, in the 1996 farm bill, and we signed that bill, deter-

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mined to change that, to let the markets run more naturally, with less Government involvement. We also have an obligation to recognize that a little bit of what Senator Byrd talked about is right on target. The fundamental structure of the country is strengthened by the preservation of strong agriculture. That just does not mean five companies running the show. That means a healthy social structure as well.

I view the dairy issue as part of that issue, keeping enough folks on the land to preserve a social structure in this country as well.

Senator KOHL. That is something with which I could not agree more. And again, I am very impressed with your sensitivity, and I appreciate your being here and your willingness to work with us.

Secretary GLICKMAN. Thank you.

Senator KOHL. Thank you.

Senator COCHRAN. Thank you, Senator Kohl.

Senator Burns.

PREPARED STATEMENT

Senator BURNS. Thank you very much, Mr. Chairman, I have an opening statement that I would like to have inserted in the record.

Senator COCHRAN. Without objection, it is so ordered.

[The statement follows:]

PREPARED STATEMENT OF SENATOR BURNS

Thank you, Mr. Chairman.

I would like to offer my thanks to Secretary Glickman for coming to the Committee today to discuss the proposed Budget for the Department of Agriculture, as submitted by the President. I do have to tell the Secretary though that I am very disappointed in the budget that this Administration has proposed. I don't feel as though the Department of Agriculture has taken into account the agricultural producers of our country in this budget. They have listened to, too many groups that are no longer related to the production of food and fiber for our great land.

The issue of great concern to me, is the funding level for real agriculture in this budget, and the misperception that the American public has about where the dollars in this budget really go. I have concerns as well about the funding for those agencies and areas that directly impact the concerns and fears of the people who make their living on the ground providing a food supply for our country. Among these are the budgets for Agricultural Research, Grain Inspection Packers and Stockyards, predator control and those agencies which make sure that these people have access to information and the continued ability to work on the land.

I am also very glad that the Secretary is here today, since later this afternoon my Montana colleagues and I will be meeting with him to discuss an issue that is of vital importance to the state of Montana. For several years now I have held hope for the Department of Agriculture, through the Animal Plant Health Inspection Service to come to the front in the debate over the disease of brucellosis in the Yellowstone bison herd.

I have to say that as of this date I have been greatly disappointed in the agency and the department in general on this issue. I feel very dissatisfied by the way that the agency has handled both the animal and human health issue in this area. I hope the Secretary remembers what a great proponent I have been of APHIS in the past and the words of encouragement I have provided in these hearings. However, later this afternoon I will discuss more thoroughly this very issue with the Secretary and will not take any more Committee time than necessary to discuss this issue today.

Before concluding on this topic though, I would like to extend to you an invitation to come to Montana. I believe it imperative that you come out and see what exactly it is that the government of the state of Montana must face on a daily basis. To make this trip beneficial to all, I think you need to schedule this trip almost immediately. I would be more than glad to accompany you so that you can see the problem we are facing right up front and in person.

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Mr. Secretary, I continue, as in years past, to be very concerned about the Agricultural Research Budget. As always this Administration has continued to defund the grants, which are of extreme importance to states like mine and those that surround Montana. I am also concerned with the budget increase for the Agricultural Research Service which will provide funds for nutrition research and not provide an increase in funds for those areas which will provide for the farming family on the land.

In looking at the proposed budget, I have seen the increase in the ARS budget, but when I look at where the dollars are going, I see programs that will not help the family farm. The budget, as proposed by the President, will provide additional funds to the nutrition study of our food supply. Mr. Secretary, there are numerous groups in downtown Washington, that are providing this research at little or no input of taxpayer dollars.

When visiting with my fellow Montanans, I find that they want research dollars going to funds which will provide for them in the future, not to groups or organizations that seek to tell them what is in that steak or vegetable dish that they are eating tonight. What we seek are ways to increase what we have now and what we can do to help the family farmer.

These people ask that their tax dollars go to the universities that will provide for them in the future. They want to see their tax dollars go to something that will assist the future and their children. Yet this Administration seeks to provide funding for special interests that have no interest in the future of the food and fiber provided by agricultural producers in our nation.

While reviewing the budget proposal earlier this month I was also concerned with the manner in which the department thought it necessary to reduce funding for Grain Inspection, Packers and Stockyards. During the past two years Congress has heard the numerous concerns of the livestock producer on the issue of packer concentration. Yet as we look into your numbers, we see where you think you can get by asking more from this agency and provide them with less funds to investigate what is happening on the ground.

This work needs to be done to provide a sense of confidence in the federal government by the people that fund that very government. Yet it appears your department has no concern for the developing or renewing that confidence. I hope you will not tell me that the Department feels that they can make up the difference in user fees, because I have great concern about them as well.

Mr. Secretary, as the past year has moved by us, I have become increasingly concerned with the manner in which your department has proceeded with the implementation of the most recent farm bill. It appears to me, that the rule making procedure has been used to benefit the department and not the producers in the field. A case in point is the recent rule making on the Conservation Reserve Program.

Within the past few weeks you have finally put out the final rules on CRP. This week you are taking the time to educate your field personnel, and next week you start the process for signing up for the program. At this then, you only give producers a few days more than three weeks to make the decision of signing up for the program. This action is undefendable to me.

Basically, I guess I am concerned with the amount of leadership, and where the leadership in your department is coming from. One example of this comes directly from my office. Recently in an attempt to schedule the meeting for this afternoon, my staff was ignored in efforts to make contact with you to schedule this appointment. I will get into more detail with you on this later, but Mr. Secretary, I would expect a little more from a former member of Congress.

Mr. Chairman, I have lost a great deal of confidence in the Department of Agriculture this past year. I would hope that today, both in this meeting and later with Secretary Babbitt, that the Secretary can give me some reason to restore my faith and confidence in this department. The agriculture producers in our country deserve a department that is working for them and not against them. They expect and deserve a Secretary that will be out there telling their story. This is something that I would like to see as well.

We are facing a time in agriculture where the vast majority of the people of this country have no idea of the pleasure of being on the land, of working with livestock and seeing of nature reborn every spring. Our country needs leadership that will provide this rural lifestyle to continue and not always feel like "Big Brother" is trying to put them out of business and drive them off the land.

I look forward to listening to Secretary Glickman and learning what he plans to do with the funding that the Administration has budgeted for Agriculture this year. It is my sincere hope that he can give me reason to renew my confidence and faith in the Department of Agriculture.

Thank you, Mr. Chairman.

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ARS FUNDING

Senator BURNS. Mr. Secretary, thank you.

I want to stress just some of my concerns with this appropriation and where you have placed your emphasis and where I am going to—I am going to be very, very up forward with—I hope you change some of it. First of all, I do not think you have got near enough money in ARS. I think, if there is one area that we are lacking in the U.S. Department of Agriculture it is in agricultural research.

Now, you did increase some dollars there. But the dollars went the wrong way. We have got people all over this country doing nutrition studies and recommending diets and all this healthy stuff. And I will probably die before I am 62, but that is OK; it is because I eat all the wrong stuff. I happen to like it. But we are not doing enough as far as helping production agriculture.

Now, everybody wants to keep that young farmer on the farm, but I do not see anybody out here in the Department of Agriculture leading the band to say we ought to reform estate taxes so we can pass our farms on to the next generation. I do not see anybody in the Agriculture Department doing that.

Mr. Secretary, we are to the point now where we need an advocate for the farmer. We need an advocate for the people who provide the food and fiber for this country, and quit fiddling around with this other stuff.

And Robert Byrd hit it over here a while ago—the way we handle our water is very, very important. I have a daughter that graduates from medical school this spring. I am very proud of her. You know what she said? The advances that we have made in medicine have only contributed 5 percent to the increasing of the average life-span in this country. The rest of it has been the way we handle our water. That has really done more to extend our life expectancy than anything that we have done in this country. So I think it is very important.

In ARS, I do not think you have got enough money. In construction, we need some more money. And do not worry about the nutrition programs; let us worry about production agriculture. I want to change that formula a little bit. And I will work with you on that. That is one area.

The next one, and with that, through ARS, is extension. I think that is very important. It does nothing to do the work if we cannot get that information out to the people who have to apply the new technologies and the work that we have done through ARS.

INSPECTION ACTIVITIES

Let us talk about inspection just for a second. We got a situation on the border. We are going to address that. And we will talk to you about that more privately with the situation up there. Because I happen to believe that whoever said that they are going to pass along these increased fees on inspections to the consumer, they are as crazy as a bedbug. It is going to go right back to the producer.

Because I do not care how you look at it, agriculture will always—we will always buy retail, we will always sell wholesale, and we will pay the freight both ways and all the incidentals in be-

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tween. We will always do that. And anybody that does not understand that ain't never lived on 160 acres of two rocks and one dirt. And there is a difference right now. There is a disparity between the way we inspect chickens and poultry and the way we inspect red meats.

We are not playing with a level playing field there. And I think it is time that we take a good look at that. We have got some good people down in P&S and at our Inspection Service. They have some recommendations and I think we should take those recommendations.

FIELD OFFICE CLOSINGS

And then another area, you are talking about a reduction in force as far as our service centers are concerned. I want to see that reduction happen here before it happens at the point of sale, so to speak. We are talking about closing offices in Montana. And we have got long distances out there. And I would ask you to take a good look at your force here, and then take a look at the force out there at the sort of point of sale or point of service. That is where we need to put our people, and help some of these people through some of these very stressful times.

As far as the bee situation is concerned, I voted for the bees. I am happy to say, this old, conservative Republican voted for that liberal, old program of helping the beekeepers. Now, all at once, we are finding out that that was a very, very shortsighted situation. It is also shortsighted in the wool incentive. Because we have one-half as many sheep in this country as we had whenever that incentive went away. And that is the biggest share of it. And that did not cost the taxpayer anything but the administrative costs. And that is a shame.

So in order to cut programs and to be heroes to what we think is perceived as helping the taxpayer, we absolutely hurt the taxpayer and in a lot of different ways. So those are the areas that I will be looking at. I do not have any specific questions. But I am going to make some recommendations to you with regard to where we spend our money on these appropriations. Because I think there are some disparities there that are just very glaring.

ADVOCATE FOR AGRICULTURE

And, Mr. Secretary, I am down to the point where we in agriculture have got to have an advocate at the USDA. Everybody else has got one down there, but not this old guy out here that is—and we are going to lose a lot—do not worry about the numbers of cattle—we are going to take care of that—North Dakota, South Dakota, and eastern Montana—we are going to take care of a lot of those numbers this year. We are going to lose a lot of cattle—frozen to death, standing. Could not get feed to them.

And besides that, it has been terribly cold. And right now they are saying snow does not qualify as being a disaster. But we should take a look at that and see if we cannot do something about that.

But those are the areas that I am really concerned about—inspection, how we inspect, are we dealing with products coming into this country, are they coming in on the same label, are they going through the same hoops that our local producers have to go

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through. And that is my statement. I am going to see you this afternoon if I get out of here. Because I have got to go look on television now—about violence on television.

Secretary GLICKMAN. Can I just make a couple of quick comments?

Senator BURNS. Yes, sir.

Secretary GLICKMAN. First, I appreciate your comments concerning the Agricultural Research Service [ARS]. Congress has to reauthorize the research programs this year. So to the extent of redirecting priorities, that will be a part of the process. Clearly, we have the best agricultural research establishment in the world. We want to keep it that way.

INSPECTION ACTIVITIES

On the issue of inspection, just so that you know, we recently announced some changes in increasing the amount of random inspections of meat coming across from Canada. Your office probably got a copy of this, but we will make sure you get a copy of what was done. I think you will find that somewhat helpful in the process.

On the disparity issue, the fact is there are differences between chickens and beef, in terms of the numbers, the quantity, and everything else. I have said publicly my goal is to achieve relative parity in the inspection process.

Senator BURNS. We just want a level playing field. Because I ain't got too many chicken farms in Montana.

Secretary GLICKMAN. Both are big parts of American agriculture, poultry and beef.

Senator BURNS. I am not worried about chickens. I have never seen a seeing-eye chicken or a stock chicken or a guard chicken. I do not know what to use them for. [Laughter.]

Secretary GLICKMAN. As you know, I come from a State which actually is the largest beef processing State in the country.

Senator BURNS. I will talk to you about concentration now. [Laughter.]

Secretary GLICKMAN. But I have grown appreciative of the significance of the poultry industry. For example, in 1990, our sales of poultry to Russia were about zero. Last year, we sold nearly 1 billion dollars' worth of chickens to Russia—\$1 billion, from zero 10 years ago, roughly. One-third of all of our poultry exports go to Russia. Nearly 25 percent of everything the Russians buy from us, which includes pharmaceuticals, cars, airplanes, nearly 25 percent is chickens.

Senator BURNS. I am sorry I brought it up now. [Laughter.]

Secretary GLICKMAN. So I guess my point is that it is an important industry as well. At the same time, we do not want to give any one part of the livestock industry a disproportionate advantage in the slaughtering and in inspection process. That is not my goal. Our goal is to move those industries to a more comparable level. We are doing that as a matter of fact.

Senator BURNS. Well, there is a disparity there, and if we could address that, that would be fine. But that is not high on my agenda either. I think the ARS, extension, the way we deliver our services to our farmer, and we need an advocate. I have never seen a time when agriculture needed it more than we do right now. Because we

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have got a lot of answers for this society. And we are not having riots out there, you know. None of that. But we want to keep on producing, too.

And I am sure glad to hear now that—the cloning of the sheep, I realize why Dale would be concerned about that.

Thank you very much. [Laughter.]

Senator COCHRAN. Thank you, Senator Burns.

Senator Leahy.

Senator LEAHY. Thank you, Mr. Chairman. I am delighted to be a member on this subcommittee. You and I have served together on appropriations for many years, as well as on the Agriculture Committee because of the influence this subcommittee has on agriculture and the environment and USDA and the lives of people who use the WIC Program or other nutrition programs. And I find that very interesting.

NATIONAL CHEESE EXCHANGE

I listened to what Senator Kohl said about reducing the influence of the Cheese Exchange and the pricing of milk. Well, I agree. It makes no sense in my State of Vermont, for example, to see a little cheese exchange, which has really no influence in our State at all, other than the fact that whatever happens on it can dramatically change overnight the price of milk in Vermont. It has nothing to do with supply and demand. It has only to do with what one company or two companies might do in that one exchange.

I think that we can find a far better way to have a statistically reliable national survey system to monitor prices. What I would suggest is do something like we do with the New York Times best seller list. The New York Times goes each week to different booksellers, checking how the books are being done. For example, every week, the New York Times checks a list sort of at random, of bookstores. That way, no book publisher can just buy up all their own books and go up to the best seller list.

What has happened on the Cheese Exchange, though, is just the opposite. They know that every single week or month or whatever it be, you have to go to that same one exchange. So it is very easy to manipulate it.

As I said, when we see the price of milk drop precipitously, for example, in Vermont, and yet the supply and demand has not changed a bit, you have to ask what caused this. And if the cause is one small exchange and some people probably speculating or manipulating, then we have to find a different system. And I will work with you in any way we can to do that.

It has been mentioned here also the farm bill. And I would note to everybody, a lot of work went into that farm bill and passing it last year. It was a bipartisan coalition in the Senate. I was part of that. We worked very hard to compromise and to put one together. It meant that Republicans and Democrats had to work together. A lot of special interests, from the left to the right, were left outside the door while we tried to do what was best for this country.

I would also note, Mr. Chairman, that as I recall, that farm bill got the largest number of votes a farm bill has gotten, certainly since I have been in the U.S. Senate. I say that because I will fight

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any and all attempts to undo that bill before we have a chance to see how it works.

I have heard some discussion among some that say we have to revisit it and basically rewrite it. I will do everything, from having a chance to instruct my colleagues on what goes into a farm bill—I understand there are several hundred pages that they probably have not had a chance to read, although they may want to hear me say them over the days and weeks and months on the floor if there is going to be a change.

NUTRITION PROGRAMS

We established spending, such as the CRP, the Conservation Reserve Program. We have to work together, protecting these programs and to protect our environment. The nutrition programs—I support the President's request for \$100 million for a supplemental appropriations for the WIC Program. If we take advantage of the savings identified, we can provide supplemental funds to feed 400,000 additional infants, children, and pregnant women.

We have hungry children in a nation where none of us in this room goes hungry except by choice. If you stop to think about that, there is not a single person in this room who goes hungry or will go hungry today except by choice. We have a lot of children who do not have that choice. And we suffer as a nation if they start off hungry and if they go into life hungry.

We have one program that works well, the Farmers Market Nutrition Program in WIC, where we spend about \$6 million on that. That has worked very, very well in my State. What it means, Mr. Chairman, is that on these farmers markets, people can use WIC certificates and they get food that is extremely fresh, that had been growing hours before they get it.

I look forward to being on this committee. I have questions which I will submit for the record.

I was pleased, as I said, to see the question on the Cheese Exchange come up.

And I would hope that the Department might continue to look at the electronic benefits transfer system—that is an entirely different thing—on food stamps. As the son of a printer, I hate to say this—but we are spending hundreds of millions of dollars in printing food stamps. And there has to be a better way.

And also, I would think, from my days as a prosecutor, I think that you could track fraud a lot easier with an electronic system. It certainly would be fairly easy to set up a program where, if you suddenly see a huge spike in the use of food stamps in one small store, that you would at least call your investigators' attention to it.

Thank you, Mr. Chairman.

RUSSIA'S ECONOMIC AND POLITICAL SITUATION

Senator COCHRAN. Thank you very much, Senator Leahy.

Mr. Secretary, this morning I had an interesting experience, having been invited to a breakfast meeting sponsored by the Aspen Institute. I heard a presentation from Dr. Peter Reddaway, who is professor of political science and international affairs at George Washington University. He discussed the current political and eco-

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conomic situation in Russia. Your reference to the tremendous growth of Russia as a market for poultry exports reminded me of some things he said. I thought you might be interested in hearing some of his comments, because they may very well affect the capacity of Russia to continue to be an important market for United States food exports.

He said that the gross domestic product in Russia is down 50 percent over the last few years—I think he said 4 years—even though they have an inflation rate that is very modest—almost zero—and their debt-to-GDP ratio is about 7 percent. Those are the only good things that you can say about the Russian economy today. Because, in his view—and he said this is shared by others—the economy is in a very serious state—almost a state of near collapse because of the criminal element that has taken over in large measure. The economy is being criminalized and corrupted in ways that very few realize around the world today.

He said: In July, funds for rations to feed the military will cease to exist. The central government will not have funds to make available to the military to buy food. And that regional governments will be asked to provide those funds or foodstuffs to feed the military forces that are deployed in the various regions of Russia.

It is almost shocking or alarming to me to just hear the various other characteristics of the Russian economy. I bring that up because I am curious to know whether the Department of Agriculture is aware of these reports and whether or not any assessment is being done on the impact on American agriculture of the state of the economy in Russia.

Secretary GLICKMAN. The answer to the second question is yes. Our Foreign Agricultural Service is actively involved. We have people in Moscow and throughout the area, trying to analyze these conditions. And also we rely on intelligence reports as well.

But let me tell you an interesting thing. Vice President Gore and the Prime Minister of Russia, Mr. Chernomyrdin, they have this commission, the Gore-Chernomyrdin Commission. They meet twice a year, once there and once here. We just had our meeting here. I was with my counterpart, Mr. Zavaruka, who is the Deputy Minister for Agriculture. I am not sure I heard as bearish a sounding scenario, but it is clear that one of the reasons why they have just extraordinarily exploded their demand for American poultry is because they have lost their infrastructure to produce farm commodities of all sorts. They do not have the feed available. It is just a combination of factors.

One of the things that they clearly said to us was that you cannot expect to have these markets forever unless you help us develop our own poultry infrastructure, which our industry is beginning to do. We are involved in joint venture activities; and, we are trying to help with that. Because we believe, without that, we risk the fact, politically, of having these markets removed.

Remember, they tried to do this last year, alleging Salmonella, or some other sanitary type of problem. But they do not have, because of the lack of marketing and financing capability, much of an agricultural infrastructure at all. Obviously, we are worried about it. The days of us selling large amounts of grain have long passed. But there is some reason to believe they may need some grain in

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the future because of their infrastructure problems. We are ready, willing, and able to help with that. I talked with the Agriculture Minister about that as well.

They clearly are in deep trouble, but my impression from the meeting that we had was that there is some degree of political stability, depending of course on President Yeltsin's health and other things. We just have to do our best to try to improve their economic and political structures. In the meantime, they still need our poultry. They do not have the infrastructure to grow their own chickens in any kind of marketable way.

The old days of us being very dependent upon them in the grains are gone. They do not have the resources to buy it. We have seen ourselves become somewhat dependent on the poultry situation over the last few years and we have got to recognize that it may be tenuous. I mean we have got to hope their political structure is such that they can continue that process.

Senator COCHRAN. There are no estimates in the Department as to the length of time that this kind of purchase record or practice of buying poultry products can be sustained? Are you making any estimates or projections of that?

Secretary GLICKMAN. No; at least not as a result of these meetings. As you may know, when the Russians made sounds to cut off these imports of poultry, the Vice President personally intervened and the Prime Minister also personally intervened, to see what was going on. It is clear that we also have an obligation to help them develop their own indigenous industry. Our industry understands that and is working on that. But, I do not have any formal projections.

I would just tell you that we are dealing with a rather tenuous economy over there.

RUSSIA'S ECONOMIC AND POLITICAL SITUATION

Senator COCHRAN. One question that was asked of this professor at this breakfast meeting was what kind of aid programs would be most effective in assisting in the continued strengthening of the Russian economy. He talked about training programs, education exchanges, technical assistance, and the like. Are there any Department of Agriculture programs that are ongoing that you are requesting funding for that are specifically designed to deal with that problem in Russia?

Secretary GLICKMAN. Yes; but let me first tell you that we have a book we have published, called "Agriculture Baseline Projections to the Year 2005." Basically, it analyzes every commodity, every importer, every exporter. I would have to say that our projections, poultry trade projections, are actually a slight increase over the next 5 to 6 years.

Senator COCHRAN. Is that worldwide?

Secretary GLICKMAN. That is to Russia.

Senator COCHRAN. To Russia specifically?

Mr. COLLINS. Excuse me, that is worldwide. That would be Russia's global imports of poultry. That is premised on some recovery in their economy. The economic data on gross domestic product, which you pointed out, have been somewhat of a surprise to analysts who have followed Russia over the last several years. For

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about 2 or 3 years in a row now, people have been forecasting that Russia's gross domestic product [GDP] growth would turn positive in the upcoming year. It has not. It has remained negative.

GDP growth is doing much better than it was a couple of years ago. A couple of years ago it was declining at about a 12-percent-per-year rate. This current year, I believe the estimates are for a couple-of-percentage-point decline. I mean this is so horrific that Americans cannot even conceive of this. We define a United States recession as two quarters of negative GDP, and we are talking about 15-percent declines per year in Russia. I think I read in the Wall Street Journal recently that Russia's GDP just turned positive.

Right now, observers believe that Russia's annual GDP growth would probably not turn positive until 1998, but most likely 1999. But at least it seems to be stabilizing. The sharp declines of the last few years seem to be bottoming out at this point.

COCHRAN FELLOWSHIP PROGRAM

Secretary GLICKMAN. Let me just make a couple of comments. As you know, there is a program named after you, the Cochran Fellowship Program. And those do provide opportunities for technical assistance to individuals. I was just in South Africa, and I met one of the Cochran fellows. And this is a young man who came over here to learn about the wine industry. He was a Cochran fellow. He has gone back and has become a leader in South Africa, in terms of trying to develop black ownership of vineyards and involvement in the wine industry. And your name came up.

There I was in the middle of South Africa, and there was the name Cochran which came up. It is something that changed his life. It just shows you how this can work.

We have market development activities. Steve, maybe you might want to talk about the various assistance programs, credit programs, et cetera, emerging democracies programs, I do not have it right at the top of my chart here.

Mr. DEWHURST. We have a series of programs, some of which provide direct assistance to exports, like the export credit programs, and some of which provide training, or what I would call indirect assistance to foreign countries. The Cochran Fellowship Program is funded in the 1998 budget at the same level it was funded in 1997, \$2.4 million.

We have about 287 international participants from 30 countries in that program this year. Over 4,800 participants moved through that program since its inception. That program is planned to continue.

When you look at the entire international portfolio of the Department, you are talking about \$7.6 billion in programs. That includes everything from the Export Enhancement Program to the cooperator program run by the Foreign Agricultural Service. We have quite a tool kit of programs, all of which are being carried out to deal with various aspects of the kinds of help we need to give foreign countries or our own exporters.

Senator COCHRAN. I know that in our budget, we are going to be constrained by the allocation we get as a subcommittee. The anticipation is that if we are lucky, we will have the same amount of

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money for our discretionary programs next fiscal year as we had in the current fiscal year—which means no increase. I am wondering whether or not we are figuring out ways to make our dollars go further in these foreign assistance programs that stimulate demand for U.S. agriculture commodities and help foreign economies buy more of what we produce here for sale in the global market.

I know that in the cooperator program, for example—and I was going to ask you about this—

Secretary GLICKMAN. Which program, sir?

FOREIGN MARKET DEVELOPMENT COOPERATOR PROGRAM

Senator COCHRAN. With respect to the cooperator program that the Foreign Agricultural Service administers, there is a change that is suggested in the budget submission which would require co-operators, U.S. agriculture commodity groups, to pay more to participate in that program. Is that going to enlarge the program? Or is that required just to keep the program at current levels?

Secretary GLICKMAN. Steve, do you want to comment on the cooperator program?

Mr. DEWHURST. Yes, sir; it is required just to keep the program at current levels. The FAS, like a lot of our agencies, has costs that are rising faster than our ability to add money to their discretionary budget. And in particular, in the Foreign Agricultural Service, they jointly finance a computer center with the Commodity Credit Corporation. In the fiscal year 1998 budget, a greater share of that cost is on the FAS side of the agenda.

They have to absorb that cost. The way they have done it is to constrain the new money that is going into the cooperator program. The only way to keep the program at the prior level is, then, to ask the cooperators to make a greater contribution to the program.

Senator COCHRAN. Has there been any effort of outreach to discuss this with the participants, to see whether or not they are going to pay these extra assessments or required increases, or whether they are going to just maintain their current level of contribution and therefore decrease the activity in this program? Do you know the answer to that?

Mr. DEWHURST. No; I know that the Foreign Agricultural Service has had discussions with the cooperators. However, I do not know where they have come out on that question.

MARKET ACCESS PROGRAM

Secretary GLICKMAN. On the Market Access Program [MAP], the Foreign Agricultural Service has engaged in efforts to improve its operation, in targeting its impact more in recent years. I believe that program gets a lot of criticism; but, it is a drop in the bucket compared to what the rest of the world spends. We are proposing flat-lining that number this year.

Frankly, I would like to have more money to spend in it. But it has had a remarkable impact on everything from fresh fruits and vegetables to livestock. And we think it is very important.

The French, I think, spend as much on promoting their wine alone as we spend on our entire Market Access Program.

Senator COCHRAN. That is an argument I remember using against an amendment to knock out the money for the program

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when this bill was on the floor last year. We are always confronted with some amendment to either reduce the level of funding of the program or to cancel it completely. I am glad that the administration is supporting full funding for the program. I commend you for your efforts to get that included in the budget.

I was going to ask you about the changes that you mentioned are being made to target and reform and try to change the program to meet some of the criticisms. I know you probably do not have all that available to you, but I would like to have that for the record—what changes you are planning to implement or have implemented—so we will know what they are. I assume they are all authorized under the law and that you would not go beyond the authorities of existing law in changing the program. But whatever you have in mind or whatever you have in place, we would like to know about it.

Secretary GLICKMAN. OK, we will get you that.
[The information follows:]

MARKET ACCESS PROGRAM

Changes have been made in the Market Access Program (MAP) to make it more targeted and to increase small business participation in the program. For fiscal year 1998, the budget includes the full authorized permanent funding level of \$90 million for MAP.

The Market Access Program has been an important contributor to the gain in U.S. world market share of sales of consumer-oriented products since 1985. During this period, MAP and its predecessor, the Targeted Export Assistance Program, have helped this share grow from 11 percent to 18 percent in 1994. Each percent gain represents sales of more than \$1 billion. While changes in the value of the dollar have added to the growth, analysis carried out by FAS has indicated that market promotion contributed to more than half of the total increase.

Consistent with the Administration's commitment to streamlining government activity, new MAP regulations were published on February 1, 1995, that increased flexibility and simplified program requirements for participants. The revised regulations also reflected public comments and changes made by the Omnibus Budget Reconciliation Act of 1993. Among the changes made by the rule are:

- (a) U.S. exporters no longer need to show that a U.S. agricultural commodity faces an unfair trade practice in an overseas market in order to participate in the program;
- (b) Small businesses and cooperatives are accorded priority consideration in the allocation of brand promotion funding;
- (c) Application and allocation approval criteria are clarified;
- (d) Paperwork requirements are reduced;
- (e) Procedures for appealing compliance findings are added; and
- (f) Program evaluation requirements are clarified and simplified.

Secretary GLICKMAN. There has been some targeting to cooperatives and smaller operations. But we will get you that information.

Senator COCHRAN. Some of those changes may be required by the changes that we had to accept when the appropriations bill was on the floor.

Secretary GLICKMAN. That is right.

U.S. AGRICULTURAL OUTLOOK

Senator COCHRAN. In connection with the outlook in the report that you have there, talking about Russia's capacity to continue to purchase United States agricultural commodities in the global market, what is the outlook generally for world economic conditions and the impact that that will have on United States agriculture

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and the demand for United States agricultural commodities? What do you show in your outlook report?

Secretary GLICKMAN. Keith, you take it first.

Mr. COLLINS. Generally, it is fairly positive. And that is premised primarily on strong economic growth, particularly in Asia and in Latin America. Those would be the two greatest areas of growth. This past year we had agricultural exports of about \$60 billion. We show them coming down a little bit in the current year, to \$56.5 billion. And then, generally, we show them trending up to the year 2005, getting up to something in the order of \$80 billion.

But the driving force behind this is principally economic growth in less-developed countries, which, this year, will run about 5.5 percent. That is a tremendous source of growth, particularly for our feed grains and our oilseeds and our livestock products and our high-value products.

NORTH AMERICAN FREE-TRADE AGREEMENT

Senator COCHRAN. There are some who are suggesting that we have got some bilateral problems in Latin America. You mentioned that as a potential growth area. I wonder what your assessment of the North American Free-Trade Agreement has been for agriculture, and specifically for some of our commodities like rice, beef, and others, where some dramatic changes were predicted for the better. Have those turned out to be forthcoming? What is the consequence of that agreement on American agriculture?

Secretary GLICKMAN. Let me just say, by and large, the NAFTA agreement has been positive for agriculture, particularly livestock has been an area that has been positive. Now, the President of Chile is here as we speak. Yesterday he came in and the President met with him. And then we had a little larger meeting with the Trade Representative and myself and some other folks.

It was interesting. The first item mentioned was agriculture. We have some problems with Chile. One has to do with wheat and the importation of American wheat. They have some sanitary and phytosanitary requirements that we think are unrealistic and unnecessary. Also poultry is another area where we think the same thing is there.

We told them, both the President and I, said that the passage of fast-track legislation certainly could have an impact on agriculture and the ability to believe that they are taking our commodities will be a helpful factor in getting that fast-track legislation through. As a part of that, the President committed to send me to Chile a few weeks after he goes, in early May, to set up a consultative commission process on some of these bilateral trade issues with the Chileans.

We are also working with the Argentines along the same way, where we are trying to resolve some of these specific disputes that are taking place.

So I think it is pretty good. Let me just mention to you that during fiscal year 1996, United States agricultural exports to Canada and Mexico increased by 14.2 percent, reaching record levels. In the case of Mexico, United States agricultural exports reached \$5 billion in fiscal year 1996, an increase of 35 percent over fiscal year

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1995 and 38 percent over fiscal year 1993 pre-NAFTA levels. We have projected about \$5.1 billion this year.

We sell to Mexico about 75 percent of its agricultural imports. Part of that is due to our price advantage.

Imports from Mexico were \$3.67 billion in fiscal year 1996, slightly below the \$3.7 billion level for fiscal year 1995.

So, by and large, we have a positive balance of trade with Mexico, and it is growing as a result of NAFTA. Now, that does not mean there are not peculiar problems, such as tomatoes, avocados, and some of the specialty crops remain big problems. But, by and large, it is positive.

Senator COCHRAN. There was some indication to me that our rice industry is having some difficulty, at least the rice milling industry, because of increased exports of rough rice from the United States into overseas markets. There is only about 40 percent operating capacity being utilized of U.S. rice mills right now because of these increases in exportation of rough rice.

Is that something that has come to your attention, gotten to the Secretary's level yet? Is there any policy question here, or is this just a phenomenon of prices being attractive in the global market?

Secretary GLICKMAN. Keith, would you respond to that?

Mr. COLLINS. I would only say that it has been raised. We have heard about that. As we look at the data, the percentage of total exports that go out that are rough is still fairly small, perhaps 15 percent. In fact, they predominantly do go to Latin America. I have heard of other countries besides Mexico that get them, too. But I have not specifically heard much about Mexico recently. We will certainly look at that.

NORTH AMERICAN FREE-TRADE AGREEMENT

Senator COCHRAN. This was to Latin America. It was not just to Mexico. My information was to Latin America. Most other countries who grow rice and mill rice export only their milled rice, as I understand it.

Mr. COLLINS. Yes, sir.

Senator COCHRAN. But the U.S. rice mills have access only to U.S. rough rice. So if the rough rice is going out of country, they fear that they may not have enough to continue milling and doing it at a profit. That is the issue, and I just raised it to see if there was something that could be done and to make sure you had the information.

The other rice issue that I am aware of, which has been brought to my attention, involves the European Union [EU]. There is a quota apparently or an allocation of U.S. rice that has been made under a negotiated agreement. Over \$20 million of U.S. rice could be purchased under this arrangement, but the U.S. rice industry and the companies that would be providing it have not been able to work out any arrangement under which that rice would be sold—like who gets to sell the rice, who gets the \$20 million-plus of new business under this arrangement.

It has also been described to me as something where the Secretary of Agriculture has a role to play in this. I don't know whether or not you are involved in trying to work this out. I am told that

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you could sign a piece of paper and it would solve all the problems. I do not know whether it is that simple or not.

Secretary GLICKMAN. I do not know what that piece of paper is. But I will try to find it this afternoon. [Laughter.]

The only thing I can tell you is that this is a problem. We believe the European Union has failed to implement the two rice tariff rate quotas [TRQ's] that it committed to in 1995. It has to do with us allocating our portion of the TRQ. But until such time as they approve that, we are unable to allocate what we have not used.

And I raised this with my counterpart in the EU. Quite frankly, I think I got the regulatory runaround on the issue. So it is a gnawing problem. It has not been solved. And let me just mention that I plan to seek an interagency meeting on how to proceed on this issue. I have tried to deal with it on a bilateral basis with my counterpart in Europe.

Now, part of the problem, I have to tell you, is that the rice industry is somewhat split on how to allocate the TRQ and how to allocate the licenses. And the EU is using that split as kind of an excuse not to open the quota.

Anyway, the ball is in our court, because we cannot hit it back because the industry kind of will not give us the racquet to hit it back on yet. So we need some degree of unanimity among the industry as well. And the Europeans are taking advantage of this split.

Senator COCHRAN. There is a fear that if we do not use that allocation agreement, we are going to lose it. Someone else is going to end up selling that rice into that market which we had negotiated for U.S. rice producers. So I am glad to know that this does have the attention of your office and that you are working with an interagency group to try to resolve it.

Secretary GLICKMAN. Yes, sir.

PUBLIC LAW 480, TITLE I

Senator COCHRAN. I know that one other potential impact that could have negative consequences on that and other commodity industries is the proposed rescission that you included in the recent submission to cancel some \$50 million of appropriations that we have already approved for Public Law 480, title I. Is this going to have a serious economic impact on agricultural producers or exporters? And why is that request being made?

Secretary GLICKMAN. These, of course, are rescissions of unallocated dollars for long-term sales for market development, and I would ask Steve to talk a little bit about that budget item.

Mr. DEWHURST. It is simply a question of having to come up with some offsets for other things that were in the budget. I think it is important to understand about title I of Public Law 480 that of the \$50 million proposed for rescission, about one-half consists of money carried over from prior years in that program, and the other one-half was a reserve maintained in that program. The rescission does not affect the allocations that were already announced. If I recall, about \$200 million in program that was announced earlier this year is not affected by the rescission. So it is a constraint, in a sense there would be no new commitments, but it will not hurt commitments that were already made.

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Senator COCHRAN. There are other questions on the subject of the Public Law 480 program which I will submit and ask that they be answered for the record, and the nutrition programs, as well. I notice that there is an assumption in the budget submission that there will be legislative changes made in the Food Stamp Program, for example, which would affect the amount of funding that would be required by that program.

Senator Leahy made a very compelling argument against trying to rewrite the farm bill when this legislation gets to the floor, or in any other way, to try to reverse decisions that have already been made on agriculture commodity programs. Well, it seems to me that that argument can also be made for other programs that come under the jurisdiction of the Agriculture Committee. We went through a very long and difficult process to legislate changes under welfare reform, and some of those have affected the requirements for funds in the budget submission that is before the committee today, specifically, the Food Stamp Program.

I do not know how the committee is going to view these proposals, but my reaction is that we are not going to go back in and try to relegislate the welfare reform program. So the assumptions that are being made may be either wishful thinking on the part of the administration or an effort to play politics with those who might be pleased to hear that the administration is requesting more money than we can lawfully spend under the Food Stamp Program, and that is what it amounts to. We do not have the legislative authority to change the program and to provide benefits to those that are not entitled to benefits under the law.

Also, I think we are going to be hard-pressed to find the dollars in the discretionary programs to keep up with last year's levels of funding, and the administration comes in and asks for increases in the discretionary levels of funding, knowing good and well we cannot appropriate at that level. It may look good to somebody out there who is pleased that the administration is asking for increases, but everybody ought to realize that increases are not likely to be made available simply because of the constraints of the budget process or legislation that has already been passed and signed by the President. He signed these bills when they were before him, and is now coming in asking for changes in specific areas to permit the expenditure of more funds.

We will look at those. I am not saying that we will not. I think we have an obligation to consider anything that you submit for our consideration, and I am going to make every effort that we do that, and that we do that in a fair-minded way.

Secretary GLICKMAN. Senator, could I just make one comment?

Senator COCHRAN. Yes.

Secretary GLICKMAN. Obviously, this is part of a Government-wide welfare reform initiative that we have a piece of. The piece, of course, relates to two things, and one is ameliorating a bit the work requirement for able-bodied people from 18 to 50. I think right now you can be on food stamps no more than 3 months in any 3-year period of time, and I think the President's proposal is 6 months out of every year. The other part had to do with legal immigrants. That is an area where there has been, frankly, some bipartisan interest in trying to soften that blow a bit.

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So we put it in here because it is part of the general proposal, and I do not know how much we will be able to get done, whether it is part of the reconciliation process or however else it is handled. Obviously, if these proposals get enacted we have got to find the resources to do it as well. But we felt like we needed to put it in there.

RESEARCH

Senator COCHRAN. The issue of research has been brought up already. Senator Burns and others talked about various aspects of research. I know Senator Byrd mentioned the ARS National Cool and Cold Water Aquaculture Center in West Virginia. We are very happy that we are constructing at Stoneville, MS, the National Warmwater Aquaculture Center, and I was pleased to see the budget contains funds to conduct research at that site. I assume from that that the administration continues to support the completion of that project on schedule.

Secretary GLICKMAN. That is correct.

Senator COCHRAN. I might say that this is a very impressive industry in terms of its economic impact in our State, and on the entire country. It is of critical importance that we do the research necessary in disease analysis and productivity issues. This is a new industry. No one really can predict what the problems are going to be, but we know of some already, and Mississippi State University is engaged in some very important research, and at this center, too, in Stoneville. It will be a clearinghouse for all research in this area, and I am very impressed for the future of the industry that we are going to have this kind of resource center.

There are other research activities on college and university campuses, as well as federally owned facilities under the jurisdiction of ARS, that are doing important work. I do not know of any other area where we have to continue to be vigilant and thoughtful in the way we allocate our resources. But that is an area where we continue to be required to spend substantial sums, in my judgment, to ensure the vitality and health of American agriculture and the nutritious aspects of food and other commodities that are produced on our farms. So we will be working to review all of those requests in your budget on those subjects.

EXTENSION SERVICE

I am disappointed to see that there are what I consider to be substantial cutbacks in funds for the Extension Service in this budget. I am not going to try to get you to explain why or argue for those here at this meeting. But I do not know of many programs that are more popular in the Congress than the extension programs are.

There are a lot of people who derive benefits from extension activities in the small towns and rural communities all across America, and particularly in those States that are more rural than urban. The Extension Service is a very important Government activity. Without it, I do not know how we would get the information and the education benefits and the other activities extension provides to the people in these rural communities who derive these program benefits. So we will look very carefully at that request,

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and I am not optimistic that we will be able to sell a substantial reduction in extension to the other members of this committee.

TAX REFORM

And on the subject of tax reform, I am hopeful that the Department will get involved in helping to argue within the administration and to the President that he should support some of these initiatives that are coming from Congress now to reform our tax system to help ensure that we have profitability on our farms and that we are able to maintain an owner base out there committed to production agriculture. It is less and less attractive for young people to stay on the farm and try to make a living farming. We now have an estate tax law that is confiscatory. It hurts those most who have been frugal, who have worked hard, who have saved, who have tried to preserve the family farm. To then take the farm away from them or force them to sell it to pay Federal estate taxes is to me a very wrong-headed national policy.

We have had 2 days of hearings in the legislative committee on the subject of tax reform, specifically estate tax reform and capital gains tax treatment of sales of our farmlands. There are other issues—income averaging, and just recently we had to fight like crazy to get a change in policy by the Treasury Department on the subject of deferred contracts, where farmers were being taxed in 1 year when they had not even received payment on contracts to sell an agriculture commodity. I do not know of anything that made some farmers madder in my State than that decision.

Well, we have got a 1-year reprieve now, but I hope that the Department of Agriculture will get involved in helping to encourage reforms and decisions on Federal tax policy that will benefit production agriculture and those engaged in it.

Secretary GLICKMAN. I would say on that last issue we were actively engaged with Treasury to get this—well, it was on the alternative minimum tax issue result. And let me just say this: You know, again I bring my prior career with me in this thing. I believe that you are correct that we need to be identifying those mechanisms in a general way which keeps family-sized agriculture alive and encourages young people to stay in agriculture.

I am not endorsing any specific tax proposals, because that is part of a bigger package and relates to revenues and deficit reduction and other kinds of things. But I do agree with you that it is appropriate for us to look at the Tax Code as part of the total picture of how we can keep people in agriculture. And we are engaged in that, I want to assure you of that.

Senator COCHRAN. Senator Specter.

GREEN BAY CHEESE EXCHANGE

Senator SPECTER. Thank you very much, Mr. Chairman.

I join in welcoming Secretary Glickman and his distinguished team to this hearing. I had been here earlier, and Senator Cochran said you would run until about this time. I hope I have not delayed anybody. I think from the tenor of the questioning when I came in, you are still hard at work on very important subjects.

I thank you very much, Mr. Secretary, for coming to northeastern Pennsylvania a couple of weeks ago and bringing Mr. Col-

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lins and others on a very serious problem of milk pricing for the farmers nationally, but especially in northeastern Pennsylvania, where the price of milk has dropped precipitously in the immediate past. And I thank you for the attention which you have given to the issue of pricing and the question as to whether the price is artificially low because of the calculation of the price of cheese as it is impacted by the Green Bay Cheese Exchange.

The information which I got from Mr. Collins and you about an increase of 10 cents on the price of cheese would amount to \$1 per hundredweight increase for milk, and the meeting which we had was a very, very important meeting. And obviously, I know about the consequences of it more than you do unless your clipping service is as good as mine.

Secretary GLICKMAN. I saw the first day of clippings, but that was it.

Senator SPECTER. I have an instinct that you do not have the clipping service in northeast Pennsylvania as good as I do. If you do, your clipping service is extraordinary.

Secretary GLICKMAN. If we do, I am spending too much money on clipping services. [Laughter.]

Senator SPECTER. Knowing you, Mr. Secretary, I would say your talent is extraordinary, but I would tell you that it had a very, very beneficial impact to bring the Secretary up, and I had a request by Tobyhanna to bring the Secretary of Defense up. Everybody in the area now wants a Secretary for their relevant problem, so you have set quite a standard for me in northeastern Pennsylvania. [Laughter.]

MILK PRICING REEVALUATION

As you know, the sense-of-the-Senate resolution was passed 83 to 15 encouraging a reevaluation of the price of milk based upon the formula for cheese, and my first inquiry to you is what have you found on a survey of the cheese market nationally?

Secretary GLICKMAN. Well, I am going to ask Keith to respond. I would say that the trip to Pennsylvania was a particularly useful one for me, and I think for Mr. Collins, as well. The size of the crowd was unexpected. We had 500 to 600, 700 people there.

Actually, as you know, a couple of weeks before the meeting we started the process of evaluating alternatives. We have gotten about 80 comments in so far, and they keep coming in about five or six a day. The expiration date for that is about a month from now. However, the team is in the process of trying to find options, and I would like options all the way from the development of the futures market to our own self-determination of price without going outside, which is the way we used to do it, by evaluating processors.

So perhaps you might want to go through that.

Mr. COLLINS. We are really proceeding on two fronts. One is to deal in the regulatory sense with our basic formula price and replace the cheese exchange.

The second is the point of your question, to collect cheese price information.

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NATIONAL CHEESE EXCHANGE

Senator SPECTER. What is the first front again, Mr. Collins?

Mr. COLLINS. To deal with the potential for replacing the National Cheese Exchange price in the formula that we use to construct what is called the basic formula price. That is a question that is bound up in the potential for a formal rulemaking and not formal rulemaking. As you know, the sense-of-the-Senate resolution asks us to proceed using the Secretary's authorities consistent with the law. I would say consistent with the law does have some impact on us because we do have another dairy policy that has been litigated recently where it has been suggested that we acted in an arbitrary and capricious way. We know that whatever we do with respect to cheese prices and the basic formula price, we want it to be able to withstand being sued.

So we have gone through this comment period that the Secretary mentioned. The comments that we are receiving, about 80 of them in roughly a 2-week period, we are sorting through them to look for evidence on two fronts. The first would be flaws with the Cheese Exchange price itself, of which there already is a body of evidence from the academic community and elsewhere. The second then is trying to determine what would be a good replacement for the National Cheese Exchange price.

If we are going to replace it using the Secretary's discretionary authority and withstand a court challenge, we would have to have something that clearly remedies the defects that we identify in the National Cheese Exchange price. So that is the process we are going through with the comment period and our own internal analysis.

The second front is to collect cheese price information directly from the industry. And on that issue we have delayed our collection effort by several weeks at the request of the cheese industry. They asked to come in and meet with us because they were concerned about the approach we were using to collect the information. We met with them a couple of weeks ago, and we are going to proceed next week. We were going to proceed in the first week of February, but we got delayed. We are going to begin in the first week of March, a national effort to collect cheese, mainly because we wanted to have an opportunity to respond to the cheese industry.

Senator SPECTER. A national collection effort on cheese prices?

Mr. COLLINS. On cheese prices, yes, sir. We do not want to collect cheese.

Secretary GLICKMAN. The other thing, of course, is working with the Coffee, Sugar, and Cocoa Exchange, which we are still doing, to try to deal with this issue of a program either of futures or options markets to somehow have a definable futures price out there.

Mr. COLLINS. Also as a possible successor to the National Cheese Exchange itself. The cheese industry would like to relocate or change, close that exchange, open a new one, and we have offered our resources to help whatever exchange might want to start a cash market for cheese.

Secretary GLICKMAN. In doing so there may be a need for some appropriated funds in some of these areas for us to help do that. We will talk to you about it. Particularly in the options area. But

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as you know, we used to set this formula price differently in years past, and we did not use the Cheese Exchange before. There are alternative methods of doing it. One of the things we are exploring is to go back to the way we did it before. I do not know whether it will have much of an effect over the long-term price of the basic formula price, but there may be less volatility using that formula, and that is something that they are looking at right now, as well.

I want to get away from that market, as I told you before, and I told Senator Kohl when he was here, the nature and thinness of that market is unacceptable because cheese is such a big part of the setting of milk prices, through the basic formula price. But I was sued recently in the area of something called the Northeast Dairy Compact, where it was argued that I made a decision that was not based on a complete record. So that case is still in litigation, and I cannot really comment much further on that. I have got to make sure this record is complete so that whatever we do is defensible it is going to have a monumental economic impact; but, we are moving in the right direction and I know your interest in it. In fact, your interest has got this thing moving from second gear to first gear.

Senator SPECTER. First gear, Mr. Secretary?

Secretary GLICKMAN. I am sorry, third gear, fourth gear, whatever the fastest gear is, Senator Specter. [Laughter.]

Senator SPECTER. Mr. Secretary, we are interested in overdrive. [Laughter.]

I am a little surprised, and I had—this is as good an occasion as any to make the personal reference. Your grandfather, Jay Glickman, would be surprised to have the gears wrong.

Mr. Chairman, my compliments may be excessive to the Secretary or may not be excessive to the Secretary, but I have a deep bias in his favor because my father and his grandfather did business together in Kansas in the thirties. And their business activities included Jay Glickman, who was in the junk business and my father was in the junk business.

Secretary GLICKMAN. We now call it the recycling business. [Laughter.]

My father used to say if it was junk it would not have sent you to college and law school.

Senator SPECTER. I call it the junk business. It sent me to law school, and it was a tremendous incentive to get out of it. [Laughter.]

NATIONAL CHEESE EXCHANGE

Without going into any more detail except to say there were big trucks involved, my father had a big truck which I learned how to drive at an early age, and I knew the difference between first and second gear. [Laughter.]

I do not think Secretary Glickman spent enough time in the business. [Laughter.]

Secretary GLICKMAN. Duly noted. [Laughter.]

Senator SPECTER. But on the subject of when, Mr. Secretary, as you know, my concern about immediate action, we were there on February 10, and I was hopeful that we would have change by the 11th, and then by the 14th—we got the resolution passed on the

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13th, and I know that you are doing collateral work on the comments, but as already noted, there is a collateral way for you to do it, and that is on your unilateral authority. And I understand that you can be sued all the time on the grounds of arbitrary and capricious. That is the last refuge of the plaintiff on trying to upset something, to make a contention that it was arbitrary and capricious, because there is nothing which an administrator does that can withstand being arbitrary and capricious. It is easy to say, but very, very difficult to prove.

Secretary GLICKMAN. Well actually, in the one case it has basically been stated that I was arbitrary and capricious. I have been given an opportunity to become unarbitrary and uncapricious. Part of it has to do with this horrendous complexity of dairy pricing, which makes it difficult to act as clearly as I can act in corn and wheat and soybeans and other things.

I do not want this thing to delay, and I am not worried about getting sued. I am worried about having the record there so I can prevail. We are going to get sued probably no matter what we do.

Senator SPECTER. Well, it is easy to allege arbitrary and capricious. It just takes one line on the typewriter. But it is very, very hard to prove in the litigation field and very difficult to sustain that. And I know you are looking for an evidentiary base, and my question, maybe to Mr. Collins, is how far have you gotten on finding other pricing which would suggest a difference with what the Cheese Exchange has set as the price?

Mr. COLLINS. To be quite frank, not very far at all. The difficulty is that we are trying to determine a price of cheese. There is only one organized market in the United States in which a price of cheese is determined. Virtually all cheese contracts that take place between private buyers and sellers off of that market use that market as a benchmark. So where do you go for new information other than that market? That is the dilemma that we have found.

We also have many people who are concerned about this market and criticizing this market, but the criticisms are not coming from the participants in the market, neither the buyers nor the sellers, who both believe that they have a market that is representative and accurate. In that kind of an environment, it has been very tough for us to find a clear-cut alternative that is superior in representing supply and demand for cheese in the United States. So we are continuing to look, but it has not been easy.

MINNESOTA AND WISCONSIN PRICE

Secretary GLICKMAN. Now, I would say before the Cheese Exchange was used, there were alternative methods out there that we used, and perhaps you might explain what those methods were. So it is not as if there are not other options.

Mr. COLLINS. Yes; what the Secretary is referring to is that in the past, prior to May 1995, we used to survey processors of grade B milk in the States of Minnesota and Wisconsin and ask them what they paid for milk and what they thought they were going to pay for milk. And that was the price that we used to set the absolute floor for all the different classes of milk in the United States.

Secretary GLICKMAN. Called the M-W price.

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Mr. COLLINS. It was called the M-W price. It did not involve cheese prices at all. It was what was called the competitive pay price for milk.

In May 1995, however, is when we switched to using both a competitive pay price and an adjuster. The adjuster utilizes the National Cheese Exchange price.

Secretary GLICKMAN. Now, why did we do that?

Mr. COLLINS. We did that because—

Secretary GLICKMAN. And I am interested in knowing, too.

Mr. COLLINS. Our statisticians who collect and tell us what that price is became increasingly convinced that they could not report a reliable and accurate price. The number of grade B plants was waning. There would be fewer and fewer of them, and the ability to get grade B plant producers to tell us what they thought they were going to pay for milk in that month was just falling apart. They were not reporting. So our statisticians told us they thought that the price series had become inaccurate. That is why we held a formal hearing. We held a national hearing and adopted the process we have now using formal rulemaking.

Senator SPECTER. We have a vote at 12:30, and I know the chairman has been very patient and this is a very complex subject. Mr. Chairman, I wonder if we might explore the possibility of having a separate hearing on this subject. I know how crowded your schedule is. If I have to take the lead to preside, if the chairman cannot do so, this is a subject which I would like to move on before we leave for the recess, because there are a lot of people beyond Pennsylvania who are interested, and I wonder if we might not be able to put together such a hearing in the next 2 or 3 weeks.

Senator COCHRAN. Senator, let me just say that I would be glad to make every effort to get that done. I think that is a good idea. It is timely. People are worried about what is going to happen. And in the South, we want to be sure it is fair to our region, too. Just because we had not thought up the amendment that you thought up or pushed on the floor as successfully as you did, we have a big stake in this too.

GREEN BAY CHEESE EXCHANGE

Senator SPECTER. Well, Mr. Chairman, the amendment that I pushed, or resolution that I pushed, arose out of my discussions with the Secretary and Mr. Collins and we were working on this. And this is the kind of an issue that comes to a head, and I have a sense that if we scheduled a hearing in 2 or 3 weeks it would bring a lot of people together.

I had moved to have a hearing on the Antitrust Subcommittee on that Friday, and I did not do so for a number of reasons. But it created a lot of interest in a big hurry about having an antitrust hearing as to whether there was collusion or some impropriety in the Green Bay Cheese Exchange, and when a hearing is scheduled there is a lot of focus of attention and a lot of these questions would then be answered. So I thank you for your willingness to do that, and we will be eager to set that up.

Senator COCHRAN. I may ask Brett Favre to be the leadoff witness. He is the quarterback of the Green Bay Packers, and he is from Mississippi. [Laughter.]

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Senator SPECTER. We would be sure to have a balanced view.
[Laughter.]

Senator COCHRAN. Well, Senator, thank you very much.

Senator SPECTER. Thank you very much.

SUBMITTED QUESTIONS

Senator COCHRAN. Mr. Secretary, I have other questions, and other members do as well. Senator Faircloth and Senator Coverdell have asked me to submit questions for your response, which we will do. We hope you will be able to answer those, and the other questions that other members might submit as well, in a timely fashion.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR COCHRAN

COUNTY OFFICE CLOSURES

Question. Mr. Secretary, it is my understanding that the President's budget assumes the elimination of 1,000 Farm Service Agency (FSA) county office employees during fiscal year 1998. Further, over the following four fiscal years, the budget assumes the elimination of an additional 4,000 county office employees. The President's budget assumes that 5,000 county employees will be cut during fiscal years 1998–2002. Is this correct?

Answer. In the fiscal year 1998 Budget proposal, a reduction of 2,119 staff years, of which 269 are Federal staff years and 1,850 are non-Federal staff years, is projected for fiscal year 1998. Current fiscal year 1997 staffing levels are 6,136 Federal staff years and 11,729 non-Federal staff years. An additional 5,000 non-Federal staff-year reduction is anticipated from fiscal year 1999 through fiscal year 2002, so the county office reduction is actually 6,850 rather than 5,000.

Question. If the information that I have is true, then by fiscal year 2002, the budget proposes that we will have reductions in federal FSA employees of 21 percent since fiscal year 1993, and reductions of county office employees of over 67 percent over the same period. Why are there disproportionate cuts in county office employees?

Answer. The FSA and other USDA agencies have made significant staffing reductions over the past several years. From fiscal year 1993 to the current fiscal year 1997, FSA reduced total staffing 21 percent. These reductions reflect an overall 19 percent reduction in Federal staff years, including 27 percent at Headquarters, and a 22 percent reduction in non-Federal staff years.

Fiscal year 1998 and the years through fiscal year 2002 reflect major proposed decreases in FSA non-Federal staff years. The fiscal year 1998 Budget proposes a reduction of 2,119 staff years for fiscal year 1998, of which 269 are Federal staff years and 1,850 are non-Federal staff years. It should be noted that although non-Federal staffing is being reduced by the programmatic impacts of the 1996 Act, the projected fiscal year 1998 Federal workforce of 5,877 includes approximately 2,265 employees at the county level performing Agricultural Credit program workload for direct and guaranteed loans. Furthermore, there are an additional 1,463 Federal FTE's at the State office level, including personnel that support farm credit activities as well as CCC activities, that perform program oversight, supervisory, and other support functions. In addition, over 260 Federal staff years are dedicated to providing common administrative support functions to the Foreign Agricultural Service and to the Risk Management Agency since, under USDA's reorganization, they no longer have administrative support personnel of their own. There is concern as to the magnitude of these reduced FSA county staffing levels by 2002 relative to projected Agency workload beyond 1998 because we want to assure service delivery to producers.

Question. It was my understanding that the reason the Department proposed a transfer of \$51 million in unused Conservation Reserve Program (CRP) balances to FSA salaries and expenses to finance buyouts in fiscal year 1997 was to avoid massive layoffs in the future. How do you propose to prevent reductions in force in the

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future years as buyouts become less attractive to employees and more expensive to taxpayers?

Answer. You are correct that these funds were needed in order for FSA to achieve the staff-year reductions estimated to be necessary in early fiscal year 1997 to downsize to the level appropriate to the anticipated workload of the 1996 Act and to stay within available fiscal year 1997 funding resources. Without this transfer to cover separation costs, the Agency would have been forced to conduct a much greater RIF during fiscal year 1997.

FSA does intend to continue to offer buyouts in an effort to minimize involuntary separations. However, not all reductions can be achieved through buyouts since the number of remaining buyout candidates is insufficient to meet the estimated 2,119 staff year reductions included in the fiscal year 1998 budget. It is also not likely that FSA will avoid future year reductions-in-force, given its budget targets through fiscal year 2002.

Question. Are you proposing reductions in force, if necessary, to reach these staff-year ceilings?

Answer. Yes, after FSA offers a voluntary buyout, then we plan to approve the use of RIF's to meet reduction targets.

Question. Has the Department asked the State Directors of FSA to provide a list of proposed county offices that could be closed in each of their States? If so, please provide to the committee the lists.

Answer. No specific plans or lists have been approved by my office concerning the number or location of FSA field office closures. Any preliminary office closing numbers reported reflect internal agency contingency planning and are not approved USDA plans. We intend to consult fully with Congress regarding any office closures before any actions are undertaken.

EMERGENCY CONSERVATION PROGRAM/DISASTER CONTINGENCY FUND

The Administration proposed no funding for the Emergency Conservation Program (ECP). Instead, a new \$5.8 billion contingent reserve for emergency funding requirements for various disaster assistance was proposed. I understand that this fund would be available to the President for disaster relief purposes and would be limited to 7 disaster assistance program.

Question. Does the Administration have a problem with the way disaster assistance has been handled by Congress? Why should we set up a contingency reserve fund?

Answer. While the Congress has been willing to respond to the needs for major disaster assistance, it has not always been able to enact measures to provide assistance in the most timely way. Even the most responsive action by Congress through supplemental appropriations following a disaster may not be timely if the need arises when the Congress is not in session. While some funds for non-emergency work related to disaster assistance are generally provided (and are requested in this budget) through regular appropriations, there is no way to truly assure a timely response to unanticipated disasters without a contingency funding mechanism.

The President's proposal will allow for the use of the contingency reserve funds through specified disaster assistance programs based on actual need. This will allow for appropriate available programs to be used to respond to a particular disaster. The proposal does provide for a 15-day period before release of funds after the President notifies the Congress. This will allow the Congress time to respond, but also assures that the Government will be able to assist communities stricken by a natural or other disaster in a timely way.

EMERGENCY CONSERVATION PROGRAM/DISASTER CONTINGENCY FUND

Question. What assurance would there be that USDA's emergency conservation and watershed prevention needs would be addressed, and not under funded to provide more funding for the five other disaster programs competing for contingency funds?

Answer. In our view, the \$5.8 billion proposal should be more than sufficient to handle all the Federal emergency work that might be needed by any of the disaster programs competing for contingency funds. It certainly would not be this Administration's intent to under fund one emergency account at the expense of another. Rather, having a central contingency reserve fund will enable Federal agencies, including FSA and NRCS, to better prepare and respond more quickly to natural disasters.

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CONTINGENCY FUND

The Administration proposed no funding for the Emergency Conservation Program (ECP). Instead, a new \$5.8 billion contingent reserve for emergency funding requirements for various disaster assistance was proposed. I understand that this fund would be available to the President for disaster relief purposes and would be limited to 7 disaster assistance programs.

Question. Why didn't the Administration include APHIS emergency activities as an eligible activity for the emergency disaster contingency fund?

Answer. The Department already has authority to fund extraordinary emergencies. We usually use the Commodity Credit Corporation (CCC) funds for this purpose.

REVENUE INSURANCE PILOT PROGRAM

Question. Mr. Secretary, you have proposed to make revenue insurance available nationwide. Currently, revenue insurance is a pilot program for certain crops in specified states. What has been the participation rate in this pilot program?

Answer. The Federal Crop Insurance Corporation developed the Income Protection—IP—Plan of Insurance. For the 1996 crop year, IP was available for corn, cotton, and spring wheat in 30 counties. For 1996, about 998 IP policies were purchased, covering about 218,000 net acres with total premiums of about \$3.4 million. For the 1997 crop year the IP pilot program was expanded and is available for corn, cotton, grain sorghum, soybeans, spring wheat, and winter wheat in 159 counties. Data for the 1997 crop year will not be available until late in the calendar year.

Under the authority of the Act, FCIC approved the Crop Revenue Coverage—CRC—and Revenue Assurance—RA plans developed by the private sector. For the 1996 crop year, CRC was available for corn and soybeans for all Iowa and Nebraska counties. For 1996, about 91,000 CRC policies were purchased, covering about 10.2 million net acres, with total premiums of about \$139.8 million. For the 1997 crop year, the availability of CRC for corn and soybeans includes all counties in the States of Colorado (corn only), Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, Ohio, Oklahoma, South Dakota, and Texas. In addition, for the 1997 crop year, CRC was made available for:

Cotton

Arizona—all counties
Georgia—all counties
Oklahoma—all counties
Texas—selected counties

Grain sorghum

Colorado—all counties
Nebraska—all counties
Oklahoma—all counties
Kansas—selected counties
Missouri—selected counties
South Dakota—selected counties

Spring wheat

Minnesota—all counties
Montana—selected counties
North Dakota—selected counties

Winter wheat

Kansas—all counties
Michigan—all counties
Nebraska—all counties
South Dakota—all counties
Texas—all counties
Washington—selected counties

FCIC approved the RA plan of insurance for corn and soybeans in all Iowa counties for the 1997 crop year. CRC and RA plans of insurance will only be available in counties if an existing multiple peril crop insurance program is also available for the crop.

Question. What are the estimated losses for this program in the pilot stage?

Answer. As of March 8, 1997, reinsured companies had reported losses of \$48.5 million for Crop Revenue Coverage for corn and soybeans in Iowa and Nebraska. The overall program loss ratio was 0.34. Losses paid to producers who purchased coverage other than catastrophic under the Actual Production History yield-based plan had been paid \$25.7 million, for a loss ratio of 0.29. By this time, reporting of losses normally is over 95 percent completed.

On that same date, losses of \$55 thousand and \$178 thousand had been reported for corn and wheat, respectively, under the Income Protection coverage plan. The respective loss ratios were 0.07 and 0.13. No losses had been reported for cotton under this revenue insurance plan. Since Income Protection is sold only in specific counties and not entire states, a comparable loss ratio for the APH coverage plan is not readily available.

NATIONWIDE EXPANSION OF REVENUE INSURANCE

Question. What is the estimated cost to extend this pilot program nationwide?

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Answer. The Administration is seeking legislative authority to offer revenue insurance nationwide. Presently, the Federal Crop Insurance Act authorizes only a pilot program of revenue insurance under direct Federal sponsorship. The plan or plans that may be offered are not yet known. Presumably, Crop Revenue Coverage would be one such plan. However, it probably does not meet the needs of all producers. Thus, some alternative plan similar to Income Protection or Revenue Assurance may be needed.

Most of the additional cost is expected to be due to greater participation induced by products that better meet producer's needs than does the standard yield-based coverage. To date, subsidies have been limited to the amount that would be paid if the producer had purchased the Actual Production History (APH) coverage plan. This cost generally is less than the APH plan for IP and RA. For CRC, the cost of the producer premium subsidy is the same as the APH plan, and an average of 9 percent extra is paid for administrative and operating expenses on the portion of the CRC premium that exceeds the premium that would have been paid under the APH plan. In general, the reimbursement to reinsured companies is slightly more than 2 percent greater than if the policy had been sold under the APH plan rather than CRC.

The cost thus depends upon several factors: the increase in total participation and the mix of products that producers purchase. Higher sales of CRC will increase costs; greater market penetration by products such as IP and RA will reduce costs.

For the purpose of the budget, FCIC assumed an increase in total participation on the order of 5 percent. It further assumed that most of the increase would be in CRC. To offset the costs associated with these assumptions, FCIC proposed that the statutory loss ratio target be reduced and made other program modifications. A part of the costs is offset by changes in other mandatory programs. The proposal is budget neutral.

CROP INSURANCE SAFETY NET

Question. Some farmers have expressed concern that no "safety net" exists for those that can't afford crop insurance or that no crop insurance coverage exists for a specific crop. Is there some way to address this concern?

Answer. Free catastrophic insurance coverage (50 percent insurance coverage indemnified at 60 percent of the maximum price) is available wherever crop insurance is offered. Producers are responsible for a minor \$50 processing fee for each crop. The fee is waived in instances when limited resource producers can not afford to pay it. Where crop insurance is not available for a crop, a noninsured assistance program provides coverage equivalent to catastrophic insurance coverage at no charge when a county suffers a widespread loss. Other alternative programs, such as the group risk plan, provide low cost coverage alternatives in many areas.

ADMINISTRATIVE EXPENSE REIMBURSEMENTS

Question. Mr. Secretary, when the administration proposed and the Congress enacted crop insurance reform, the savings from emergency ad hoc disaster relief payments provided through appropriations acts were used as PAYGO offset.

Now, for fiscal year 1998, the Administration's request indicates that this Committee is facing a new discretionary funding increase of \$203 million to reimburse private companies for crop insurance delivery expenses. This kind of supports my position at the time we enacted crop insurance reform, that it sounds too good to be true—in terms of avoiding additional costs in the future.

Why weren't the paygo emergency ad hoc disaster savings sufficient to fully offset the costs of this proposed program reform at the time it was enacted?

Answer. Prior to fiscal year 1995, the administrative and operating expenses associated with program delivery were paid from discretionary funds. The administration's budget for fiscal year 1995 requested a discretionary appropriation for this purpose. Continuation of the discretionary appropriation at baseline levels was assumed in the reform package. The appropriations committees did not fund this request. The authorizing committees were able to use paygo emergency ad hoc assistance savings to fully fund delivery expenses for fiscal years 1995 and 1996 and about 30 percent such expenses in fiscal year 1997. All such expenses for fiscal year 1997 ultimately were funded under the mandatory baseline with savings from other programs identified during the 1996 revisions to the Farm Bill. Under the reform package as enacted, approximately one-half of delivery expenses was to be paid from discretionary funds beginning in fiscal year 1998.

The request for \$203 million for fiscal year 1998 is consistent with the original reform proposal made by the administration and with the law as enacted. It is a

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request to restore the discretionary baseline that existed in fiscal years 1994 and prior.

Question. Since this cost was considered to be mandatory and is now discretionary, what would be the impact if the requested funding increase is not provided?

Answer. The General Accounting Office—GAO—recently concluded an audit of expenses associated with the delivery of the crop insurance program. The GAO found that the current reimbursement rates exceeded delivery expenses. This suggests that there are opportunities to achieve savings—\$203 million to \$150 million—in the reimbursements paid to companies without having an adverse effect on program delivery. However, if the amount requested from the discretionary account for administrative expense reimbursements is not provided, this would drastically impact the reinsured companies and their ability to deliver crop insurance products. If Congress were to appropriate anything less than the \$203 million, we would have to negotiate with the companies on how that money will be allocated. There is no other alternative in place.

Question. If an increase of \$203 million is required for fiscal year 1998, what additional discretionary funding will be required under current law in future fiscal years?

Answer. The \$203 million increase in discretionary funding for fiscal year 1998 is primarily due to the transfer of responsibilities and funds for the payment of sales commissions of agents. Consistent with the Federal Crop Insurance Reform Act of 1994, as amended, no amount can be paid from the insurance fund for sales agent commissions for the years 1998–2001. Under current law, it is estimated that in fiscal year 1999, the total request for discretionary funding will actually decrease, due to an estimated decrease in premium. For fiscal year 2000—FY 2007, it is estimated that premium levels will continually rise, therefore, slight increases in the funding requested for sales commissions of agents would occur. The amount of funding required for Administrative and Operating Expenses are only expected to increase due to inflation and pay cost increases.

REVENUE INSURANCE

Question. The Chairman of the Senate Agriculture Committee, Senator Lugar, has raised the question about the taxpayer burden of expanding crop revenue insurance. While it is desirable for producers to be able to purchase additional revenue protection, to what extent does the Department believe a Federal subsidy is required to make this commercially viable?

Answer. For many years, public policy had provided a 100 percent subsidized revenue protection plan to agriculture under the target price system. This subsidized program was eliminated under the Federal Agriculture Improvement and Reform Act of 1996. The issue now is to define the safety net that will be provided to agriculture in place of this program, and the extent to which it will be subsidized.

The issue of “subsidization of revenue insurance” must be carefully defined to assure that producers are fairly treated relative to the yield-based program and to assure there are no unintended consequences. There are many forms of revenue insurance. Many cost less than the standard yield-based coverage due to the tendency of prices and yields to change in different directions—i.e., low yields tend to be associated with high prices and vice-versa. The cost can be greater in areas having little benefit from this “natural hedge.” One form of revenue insurance—Crop Revenue Coverage—always costs more than the standard yield-based coverage. This is due to the “replacement cost” feature; that is, payment of lost production at the higher of the planting period price or the harvest period price. Because of this feature, Crop Revenue Coverage always will pay a greater indemnity than the standard yield-based coverage and therefore requires a higher premium.

Under current law, the subsidy to the producer for the premium used to determine the loss ratio is limited to the amount that would be paid had the producer purchased yield-based coverage. The subsidy for administrative and operating expenses of reinsured companies for products such as Income Protection and Revenue Assurance has been limited similarly. Only Crop Revenue Coverage has a higher cost for the administrative and operating expenses of reinsured companies, and that is limited to a small percentage (currently 9 percent, subject to more analysis of actual costs for delivery of this product) on the portion of the premium that exceeds the premium due under yield-based coverage.

The principal cost associated with expansion of revenue coverage is due to increased participation as producers respond to products that may meet their needs better than the standard yield-based coverage. This is not a subsidy of revenue insurance per se since subsidy would be authorized under the law if these producers had purchased the yield based coverage. The only additional subsidy that can be re-

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garded as due directly to revenue insurance is the small additional amount paid on a product such as Crop Revenue Coverage.

Current treatment of the different revenue policies creates inequities among them in terms of compensation for delivery expenses. Consider, for example, a policy of Revenue Assurance that generates 80 percent of the premium of yield-based coverage. This policy would generate 20 percent less compensation for delivery expenses. The frequency of loss adjustment may be slightly lower under such a policy than under the standard yield-based coverage, but the difference does not equate to 20 percent. Allowances for delivery expenses of Crop Revenue Coverage always will exceed the yield-based coverage. Such discrepancies may have the unintended consequence of encouraging greater efforts to market higher priced products.

FUNDING OF SALES COMMISSIONS OF AGENTS/DELIVERY EXPENSES

Question. The Administration is proposing legislative changes to reduce the reimbursement rate for delivery expenses, which I understand would lower the discretionary requirement from \$203 million to \$149 million. It is also proposing to make a portion of the overall reimbursement rate, not just the sales commission portion, discretionary and subject to appropriations. What would be the impact of this latter proposed change on discretionary appropriations requirements in fiscal year 1998 and future years and what is the rationale for making an increasing portion of these costs discretionary?

Answer. The 1998 budget includes an Administration proposal to reduce the administrative expense reimbursement paid to reinsured companies. As you know, under current law, the sales commissions have been paid by the FCIC Fund, which is a mandatory spending account, although still subject to appropriation.

However, current law requires that the sales commissions be treated as discretionary spending beginning in 1998.

The Department of Agriculture's (USDA) proposal does not specify a particular amount to be paid for sales commissions but reduces the overall reimbursement rate used to determine administrative expenses paid to the private insurance companies. The proposal would lower the reimbursement rate from 28 percent of premiums sold for multiple-peril crop insurance to 24.5 percent in 1998. The proposal specifies that 10.5 percentage points of the proposed rate be considered discretionary spending. This proposal achieves a reduction in discretionary spending of \$52,852,000 from current law to \$149,719,000 for 1998.

The USDA wanted the savings on the discretionary side of the budget to reduce the burden of the shift to discretionary spending that is required by current law. While we wanted to reduce delivery expenses, we did not want agents to bear more than a fair share of the reduction but wanted this to be a matter of negotiation between the agents and their companies, without our involvement. Therefore, our proposal provides for eliminating the distinction in current law that subjects only the sales commissions portion of delivery expenses to discretionary spending ceilings.

Question. Since the Subcommittee will, at a minimum, need to offset the cost of any increase provided, what funding reductions would you recommend in USDA's existing programs to offset the increase requested for crop insurance delivery expenses?

Answer. To offset the additional delivery expenses involved in expanding the revenue insurance program, the Department proposes to reduce the reimbursement rate used to determine administrative expenses paid to reinsured companies. This proposal would lower the rate from 28 percent to 24.5 percent in 1998. RMA also proposes to reduce the loss ratio from its current 1.10 level to 1.085 in 1998 and 1.06 thereafter. The reduction in the loss ratio partially offsets the cost of expanding nationwide revenue insurance. The Department is also coordinating efforts to further offset this proposal.

RURAL HOUSING LOAN LEVELS

The Section 502 Rural Housing fiscal year 1996 program level was \$1 billion. The 1997 program level was reduced to \$585 million due to higher interest rate changes in the economy. The fiscal year 1997 appropriated loan levels were based on the overly optimistic fiscal year 1997 President's loan levels.

Question. Are the proposed fiscal year 1998 loans levels more realistic than the levels the Administration submitted for fiscal year 1997 so that a reduction in the program level will not occur in fiscal year 1998?

Answer. The Section 502 Direct Program is the most sensitive to interest rate variations for a number of factors. Any change in interest rates can effect the subsidy rate and therefore the program level. In fiscal year 1997, the budget authority appropriated for the RHS single family housing program was \$83 million. It was

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intended to support a loan level of \$1 billion. However, the subsidy rate was based projected long-term interest rates of 5.53 percent. By the summer of 1996, the trend of falling interest rates had changed directions and it was realized that the forecast would be much lower than the execution rate which eventually turned out to be 7.11 percent. The impact of this increase lowered the Section 502 program level to \$585.3 million nationwide, or 52 percent of what Congress authorized as a program level when appropriating \$83 million budget authority. For fiscal year 1998, we are requesting \$128 million in budget authority with forecasted interest rate of 6.16 percent and subsidy cost of 12.81. We feel this is a realistic assumption based on the current economic trend, however, all direct loan programs will continue to be at risk given the dynamics of the current economy.

Question. Please explain the necessity of the Administration's proposal to transfer budget authority from HUD to the Rural Housing Service in order to administer section 8 Housing Assistance Payment contracts which are beginning to expire?

Answer. This transfer is in the best interest of the taxpayers. Rental Assistance (RA) administered by RHS is less expensive. Cost savings are due to differing Agency approaches for increasing the amount of the contract upon renewal. RA contracts are increased (with Agency approval) based on a determination of project costs, while Section 8 contracts were originally based on rents in the broader market. These Section 8 contracts are automatically increased through the application of the Annual Adjustment Factor, which in the past years led to subsidized rents which are sometimes in excess of the market rents for the area.

Under the fiscal year 1998 Budget, a one unit, five year Section 8 contract costs \$27,630. For RA, it cost \$14,324. Therefore, over five years, renewing the 3,665 units would cost \$52 million as RA units and \$101 million as Section 8 contracts: This would result in a five year savings of \$49 million.

Question. Is this proposal budget driven or will it assist Rural Housing Service to better satisfy the rental assistance renewal contracts for its customers?

Answer. Both. First, the cost savings to the taxpayers are significant. Under the fiscal year 1998 Budget, a one unit, five year Section 8 contract costs \$27,630. For RA, it cost \$14,324. Therefore, over five years, renewing the 3,665 units would cost \$52 million as RA units and \$101 million as Section 8 contracts: This would result in a five year savings of \$49 million.

Additionally, management fees will be reduced by approximately \$2 per unit on a monthly basis by eliminating HUD requirements for these projects. Savings to project owners/operators could be passed on in the form of lower project rents and thus reduce rental assistance needs.

FARM CREDIT PROPOSAL

Question. Mr. Secretary, in your opening statement you say that USDA will be proposing legislation to improve farm credit services, What is your proposal to improve farm credit services mentioned in your opening statement, Mr. Secretary?

Answer. We are proposing to provide some latitude for assisting those former borrowers who have received a debt forgiveness in the past. The 1996 Farm Bill banned such assistance, except for operating loans to ongoing borrowers whose loans have been restructured. We believe that the Farm Bill went too far in denying former borrowers a second chance. It is a stricter standard than even bankruptcy imposes. Our proposal would simply provide our borrowers with the same opportunity for rebuilding their credit record, in accordance with the standards of conventional lenders, and being able to return to us for farm loan assistance in times of need.

We are also asking for authority to conduct pilot programs, using farm credit program funding, to test innovative methods for meeting program objectives. For example current law does not permit using guaranteed loans for leases, which could be an effective means to assist beginning farmers. This could be tested on a pilot basis and, if successful, consideration could be given to authorizing a nationwide program.

Two other provisions of the proposal would make the guaranteed program more attractive to private lenders: allowing operating loan funds to be used for real estate installments and providing some flexibility for waiving the borrower training requirement.

We also are asking for some technical changes relating to homestead protection, and the shared appreciation agreements that apply to loan writedowns; as well as the elimination of the softwood timber program and net recovery buyouts, both of which are duplicated by other, broader based authorities.

NUTRITION EDUCATION AND TRAINING (NET) PROGRAM

The welfare reform bill eliminated permanent funding for the Nutrition Education Training (NET) program, as requested by the Administration. A \$10 million perma-

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ment annual appropriation had been provided for NET in previous years. This scored as PAYGO savings, but left the program unfunded for fiscal year 1997. In December of last year, the Administration reprogrammed \$3.75 million from the School Meals Initiative line item to avoid a disruption in the NET program. Now, the Administration's fiscal year 1997 supplemental/rescission package includes legislative language to reduce the \$100 million in mandatory funding provided for emergency food assistance commodity purchases by \$6.26 million to make this funding available for the NET program.

Question. Given the fact that grants to states are available through the school meals initiative and you have reprogrammed funds to make available \$3.75 million in fiscal year 1997 funding for the NET program, why is it a priority to provide additional supplemental funding to restore NET program funding to the fiscal year 1996 level?

Answer. We were able to reprogram the \$3.75 million in Team Nutrition money to NET, by not starting important Team Nutrition activities. This left NET with \$6.25 million less money than its 1996 level and \$6.25 million less than we had planned for it in 1997. Thus, the ongoing NET program was cut about 63 percent.

NET money is spent entirely at the State and local levels, so it meant big reductions in effort visible at the local level—fewer activities and projects, less material for use in the classroom, and fewer nutritionists. A 63 percent cut is not something that can go unnoticed.

This supplemental is a priority because we do not have discretionary funds that we can use to support NET. While the Administration supported changing NET from a permanent appropriation back to discretionary, we did not intend to see the program defunded—or cut 63 percent.

NET

Question. What activities are not being funded by states with NET program funding of \$3.75 million?

Answer. NET funds are allocated to States based on school enrollment. At the \$10 million level, some States have been able to maintain professional nutritionists who can conduct nutrition education programs and provide fairly extensive training and technical assistance to school food service workers. Even the smallest State received a minimum grant, amounting to \$62,500 in fiscal year 1996, enough to provide for one statewide nutrition coordinator.

At the \$3.75 million funding level, about half the States received a minimum grant of \$50,000 for fiscal year 1997, with the larger States receiving more, but not in proportion to their enrolled base. States are telling us that unless additional funds are provided they will be forced to curtail the “mini-grants” or small grants to local schools. They will also stop conducting teacher training workshops; and they will curtail classroom support. This means that teachers will have fewer nutrition education resources to use in conducting their classes.

AGRICULTURE WEATHER FORECASTING

Question. The fiscal year 1998 request for the Chief Economist's office includes additional funding of \$525,000 to modernize weather and climate acquisition.

What National Weather Service services to the agricultural community were terminated and what has been the impact on producers?

Answer. In May 1996, the National Weather Service (NWS) eliminated all agricultural weather services, all fruit frost programs, and fire weather services to non-federal agencies for non-wildfire activities, saving \$2.3 million annually and reducing staffing by 37 FTEs. Seven offices providing agricultural weather services exclusively were closed, including: Agricultural Weather Service Centers (AWSC) College Station, Texas; AWSC Stoneville, Mississippi, AWSC Auburn, Alabama; AWSC West Lafayette, Indiana; Weather Service Office (WSO) Yuma, Arizona; WSO Twin Falls, Idaho; and WSO Riverside, California. The products eliminated were: all fruit frost forecasts, specialized agricultural weather advisories, agricultural weather guidance and cranberry bog forecasts. In addition, NWS eliminated coordination on agricultural issues with federal, state, and local agencies. A detailed listing of terminated programs was published in the Federal Register, Wednesday, July 5, 1995.

Since May 1996, agricultural interests have had to rely on NWS services provided to the general public or on specialized services provided by private forecasters for a fee. Both the NWS and private forecasters rely on data collected and disseminated by the NWS. However, since the program termination, data from agricultural areas is not being collected. As a result, forecasters do not have access to the meteorological data they need to make accurate forecasts for agricultural areas.

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Question. How will the additional funding requested for the fiscal year 1998 to modernize weather and climate data acquisition benefit the agricultural community? Will the funding requested cover both the collection and dissemination of weather data to farmers? What additional funding will be required in future years?

Answer. The \$525,000 requested is to install state-of-the-art weather and climate data acquisition hardware in USDA. This is necessary due to the National Weather Service's modernization program. USDA must adopt communication technologies compatible with those being implemented throughout the NWS in order to continue receiving the global data and forecasts disseminated by the NWS. Specifically, USDA must upgrade its telecommunications equipment to receive data from NWS's Advanced Weather Interactive Processing System (AWIPS) and its primary telecommunications component NOAAPORT. Access to these data enables USDA to: provide comprehensive and timely information on the impact of weather and climate on agriculture, including the provision of weather data and analysis to agricultural users; monitor and interpret significant global weather developments and their implications for agriculture; publish the "Weekly Weather and Crop Bulletin;" and analyze the impacts of droughts, freezes and other significant events. The private sector utilizes USDA weather data and analysis to generate value-added products for use the agricultural community. In addition, many agencies within USDA operate programs that are weather sensitive and rely on access to NWS data. The modernization of USDA's technology would allow continued timely access to NWS data.

It is also important that the data obtained is accurate and comprehensive. Therefore, USDA is also requesting \$350,000 to begin an incremental process of re-acquiring agricultural data lost when the NWS terminated all agricultural weather programs. USDA will target one region of the country where data losses have had a significant negative impact and make all data collected available to both the NWS and private forecasters. In future budgets, additional funding may be requested to create a nationwide network of data collection and information delivery for the agricultural community.

Question. There was an AP story on Feb 19 which indicated that if Florida farmers had received formerly Federal-sponsored weather forecasts from the National Weather Service, they would have been able to protect their crops from the recent freeze. It also notes that farmers are unwilling or unable to pay for the commercial weather forecasting service and, now, Florida officials are waiting to see what the federal government does regarding farm forecasts before looking into a freeze warning system for the state.

To what extent is it true that the continued availability of National Weather Service data would have enabled Florida producers to protect their crops from freeze?

Answer. The National Weather Service acknowledges a reduction in surface weather observations in agricultural areas. During the Florida episode, surface observations available to NWS and private sector forecasters were limited to urban and airport sites; sites with well-documented warm bias. Had forecasters had hourly observations available from significantly cooler agricultural locations, these data would have triggered forecasters to issue freeze warnings early enough for growers with mitigation devices to react. Damage and losses can never be completely prevented, but it is clear that losses would have been reduced had weather data been available for rural sites. However, there is no way to quantify the extent to which crops could have been saved.

Question. In your view, what costs should be borne by the federal government, and to what extent should this data be paid for by state and local entities or by the farmers?

Answer. USDA supported the National Weather Service when it responded to congressional and administrative challenges to eliminate advisory and forecast services to specialized communities, provided there was no agricultural data loss in the transition. Unfortunately, primary data losses have occurred, and neither the NWS nor the private meteorological community can provide adequate services to the farm community without access to a sufficiently dense weather and climate data base that includes observations from agricultural sites. USDA believes specialized "value added" services to the agricultural community can and should be provided by the private sector, but that collection, quality assurance, archival and dissemination of basic weather and climate data is a federal responsibility. Basic weather and climate data are part of the environmental infrastructure, a national treasure, and must be maintained in order to respond to issues of sustainability, global change, and crop impact assessment on a regional and global scale.

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INFORMATION SYSTEMS/TECHNOLOGY ARCHITECTURE

Secretary Glickman, concern over the department's effective management and modernization of its information technology systems and investments prompted this Subcommittee in its reports accompanying the 1996 and 1997 appropriations acts to direct the Department to defer all computer acquisitions until the Department examined and had in place a Department-wide information systems technology architecture.

In November of last year, Deputy Secretary Rominger notified this Subcommittee that a freeze on new investments in information technology had been issued until work was completed on that architecture, and indicated that the architecture was targeted to be completed on February 1, 1997.

Obviously, the conversion of old information systems to a new architecture is a complex and costly undertaking. None of us want to hear about another debacle, such as that recently experienced by the Internal Revenue Service with its tax systems modernization effort.

Question. What is the status of the Department's information system technology business architecture plans?

Answer. The Department has developed a high level, base line architecture. This architecture is the framework or umbrella beneath which we will now fill out the detailed pieces. It has three distinct parts—a business/data architecture, a technical standard architecture, and a telecommunications architecture. Much work has yet to be done on the details but the current work does give us some basis for considering necessary, short term investments, even before we have all the pieces.

Question. Does the Department still have a moratorium in place on new information technology investment?

Answer. Yes, the new Executive Information Technology Investment Review Board (EITIRB), which is chaired by the Deputy Secretary and comprised of the Department's Subcabinet policy officials, has decided to keep the moratorium in place until the members fully understand the technical architecture and are comfortable that the necessary implementation process is in place to ensure successful post moratorium operations.

Question. Is the Department reviewing existing systems as part of its plans?

Answer. Yes, the Office of the Chief Information Officer has reviewed the existing major systems as part of the process mandated by the Office of Management and Budget (OMB) in its memorandum 97-02. This memorandum sets forth criteria, now known as the "Raines Rules", that technology investments are to be judged by. The new USDA EITIRB, will also monitor and evaluate existing technology projects as well as new ones, to ensure that they meet expected outcomes.

Question. Have further investments in existing systems also been frozen? If not, why?

Answer. Yes, the current moratorium covers significant information technology acquisitions and certain telecommunications equipment acquisitions. This includes new investments in existing systems.

Question. Is USDA incorporating the 1996 farm bill in its strategic planning for the modernization of its information systems technology?

Answer. Yes. The 1996 legislation significantly impacted the business of many USDA agencies. Agencies have assessed the impact of this legislation, as well as other factors including the existing budget constraints and have incorporated this information into their draft strategic plans. These documents will help USDA identify the business needs of the future and serve as the basis for identifying the technology that will be needed to support the changed business needs.

INFORMATION TECHNOLOGY INVESTMENTS

Question. Aside from the preparation of an architecture plan, what other measures has the Department taken or does it plan to take before information technology investments are made?

Answer. Two new Boards have been established to help develop and implement our architecture and IRM management plans. The EITIRB, chaired by the Deputy Secretary and consisting of the Subcabinet officials from each mission area, will review technology investment proposals and ongoing projects to ensure that they are economical and effective. An Information Resources Management (IRM) Council Board, consisting of the Senior Mission Area IRM leaders, will provide technical advice to the Chief Information Officer.

Question. Although the Deputy Secretary announced that all acquisitions were suspended early this year, the Department awarded a \$61 million contract to EDS. Why?

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Answer. The contract was actually awarded to a consortium of vendors, including EDS. It is for the procurement of support services, not computers, software, etc. It represented a joint effort by the Farm Service Agency and Natural Resources Conservation Service to provide a procurement vehicle from which support services could be obtained. No actual procurement takes place until task orders are issued against the contract. This new vehicle was needed because the existing support services contract vehicles of the two agencies have expired or will do so by the end of this fiscal year.

Question. What funding is included in the fiscal year 1998 budget, by account, for information technology system investments?

Answer. The total projected funding for technology investments under the fiscal year 1998 budget is \$1,236,808,000. A breakdown by Agency and account will be provided for the record.

[The information follows:]

USDA AGENCY INFORMATION TECHNOLOGY EXPENDITURES

[Net obligations, in thousands]

Agency/office	Program/budget account	Amount by account	Fiscal year 1998 agency total
Farm and Foreign Agricultural Services:			
Foreign Agricultural Service	FAS Appropriation	\$15,397	\$15,397
Farm Service Agency	CCC	106,207	.....
	Appropriated—Salaries and Expenses	104,646	210,853
Risk Management Agency	Federal Crop Insurance Corp Revolving Fund.	3,000	.....
	RMA Appropriated—Administrative and Operations.	20,338	23,338
Food Nutrition and Consumer Services:			
Food and Consumer Service	Food Stamps:		
	EBT system development	39,000	.....
	Other system development	164,341	.....
	WIC:	15,000	.....
	EBT system development		
	Other system development	76,600	.....
	FPA	9,300	.....
	FS, CN, FPA, NPE, FDPIR, CSFP, TEFAP	27,600	331,841
Food Safety: Food Safety and Inspection Service	Appropriated—Salaries and Expenses	23,620	23,620
Marketing and Regulatory Programs:			
Agricultural Marketing Service	Marketing Services	7,001	.....
	Trust Funds	9,421	.....
	Perishable Agricultural Commodities Act ...	530	.....
	Section 32	1,281	18,233
Animal and Plant Health Inspection Service	Appropriated—Salaries and Expenses	30,709	30,709
Grain Inspection, Packers and Stockyards Administration.	Appropriated	1,562	.....
	Grain Trust Fund	1,530	3,092
Natural Resources and Environment: Forest Service.	Forest and Rangeland Research	18,633	.....
	State and Private Forestry	16,194	.....
	National Forest System	133,456	.....
	Wildland Fire Management	53,284	.....
	Reconstruction and Construction	15,136	.....
	Land Acquisition Accounts	4,262	.....
	Range Betterment Funds	382	.....
	Forest Service Permanent Appropriation	20,808	.....
	Forest Service Trust Funds	27,862	290,017
Natural Resources Conservation Service	Conservation Operations:		
	Technical Assistance	88,061	.....
	Soil Surveys	26,400	.....
	Snow Surveys	1,005	.....
	Plant Materials	1,005	.....
	Water Resource Assistance	10,060	.....
	Resource Conservation and Development ...	4,023	130,554
Research, Education and Economics:			
Agricultural Research Service	Appropriated—Salaries and Expenses	36,026	36,026

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USDA AGENCY INFORMATION TECHNOLOGY EXPENDITURES—Continued

[Net obligations, in thousands]

Agency/office	Program/budget account	Amount by account	Fiscal year 1998 agency total
Cooperative State Research, Education, and Extension Service.	Appropriation	5,679	5,679
Economic Research Service	Appropriated—Salaries and Expenses	5,353	5,353
National Agricultural Statistics Service	Agricultural Estimates	22,394	29,664
	Census	7,270	.....
Rural Development	Appropriated—Salaries and Expenses	68,388	68,388
Administration	Appropriation	925	.....
	Agriculture Buildings and Facilities	290	1,215
Office of the Chief Financial Officer	Appropriation	344	344
Office of the Chief Information Officer	Appropriation	4,828	4,828
Office of the General Counsel	Appropriation	1,537	1,537
Office of the Inspector General	Appropriated—Salaries and Expenses	4,322	4,322
Office of Communications	Appropriated	621	621
Office of Budget and Program Analysis	Appropriation—Budget and Program Analysis.	549	549
Office of the Chief Economist (Includes WAOB).	Appropriated—Salaries and Expenses	628	628
Total .....	.....	.....	1,236,808

FACILITIES CLOSURES AND PROGRAM TERMINATIONS

Question. Please provide the Committee with a consolidated list, by USDA agency, of proposed office and laboratory closures.

Answer. The Agriculture Research Service is proposing that the following two work sites and two locations be closed in fiscal year 1998:

Work Site Closures: Brawley, CA; Orono, ME

Location Closures: Mandan, ND; Prosser, WA

The Agricultural Marketing Service is proposing to close one location in fiscal year 1998 and two locations in fiscal year 1999 respectively:

Milk Market Administrators Office: Boise, ID

Cotton Grading Office: Hayti, MO

Cotton Grading Office: Lamesa, TX

The Animal and Plant Health Inspection Service is proposing to close five locations in fiscal year 1997 and three locations in fiscal year 1998 respectively:

International Services: Fort Lauderdale, FL

Veterinary Services: Jacksonville, FL

Animal Care: Tampa, FL

Plant Protection and Quarantine: Goldsboro, NC

Plant Protection and Quarantine: Spokane, WA

Animal Damage Control: Little Rock, AR

Animal Damage Control: Manhattan, KS

Animal Damage Control: St. Paul, MN

The Food Safety and Inspection Service is proposing to close twenty-nine office locations in fiscal year 1997:

Area Office: Long Beach, CA

Area Office: Sacramento, CA

Area Office: Tallahassee, FL

Area Office: Athens, GA

Area Office: Ames, IA

Area Office: Springfield, IL

Area Office: Topeka, KS

Area Office: Louisville, KY

Area Office: Baton Rouge, LA

Area Office: Jefferson City, MO

Area Office: Billings, MT

Area Office: New York, NY

Area Office: Fort Washington, PA

Area Office: Harrisburg, PA

Area Office: Austin, TX

Compliance Office: Alameda, CA

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Compliance Office: Atlanta, GA
 Compliance Office: Des Moines, IA
 Compliance Office: Moorestown, NJ
 Compliance Office: Dallas, TX
 Correlation Center: Ames, IA
 Egg Products Inspection Office: Modesto, CA
 Import Field Office: Long Beach CA
 Import Field Office: Miami, FL
 Import Field Office: Detroit, MI
 Import Field Office: New York, NY
 Import Field Office: Philadelphia, PA
 Import Field Office: Tocoma, WA
 Microbiology Laboratory: Beltsville, MD

Question. Please provide a list, by agency and for each year since fiscal year 1993, of the USDA offices and laboratories which have been closed and the amount of savings which has been achieved as a result of each closure.

Answer. The list of offices and laboratories closed since 1993 and the amount of savings which has been achieved as a result of each closure follows. Certain agencies within USDA have not had any cumulative savings due to the costs of alternative space acquisition and employee relocations associated with the closures. Out-year savings are expected and will be footnoted as applicable.

AGRICULTURAL RESEARCH SERVICE

Year	Savings	Office closures	Locations converted to work sites
1995	\$729,500	Fairbanks, AK .....	.....
	450,000	Pasadena, CA .....	.....
	756,200	Georgetown, DE .....	.....
	450,000	Savannah, GA .....	.....
	1,548,000	Lexington, KY .....	.....
	1,766,800	Oxford, NC .....	.....
	263,400	Delaware, OH .....	.....
	143,900	Lewisburg, TN .....	.....
	666,700	Suffolk, VA .....	.....
	342,600	Rotterdam, The Netherlands .....	.....
	7,117,100		
1996	12,000	.....	Brawley, CA
	124,900	.....	Houma, LA
	39,200	.....	Orono, ME
	53,500	.....	E. Grand Forks, MN
	21,700	.....	Chatsworth, NJ
	41,400	.....	Brownwood, TX
	292,700		
1998	288,900	Brawley, CA .....	.....
	122,200	Orono, ME .....	.....
	2,102,000	Mandan, ND .....	.....
	1,293,400	Prosser, WA .....	.....
	3,806,500		

AGRICULTURAL MARKETING SERVICE

Year	Savings	Office closures	Locations
1993	\$810,000	Processed Fruit & Vegetables	Los Angeles, CA
	471,000	Processed Fruit & Vegetables	Denver, CO
	8,000	Milk Marketing Administrators	Evansville, IN
	.....	Poultry Market News	Kansas City, MO
	11,000	Milk Marketing Administrators	Omaha, NE
	11,000	Milk Marketing Administrators	Beaverton, OR
	35,000	Milk Marketing Administrators	Knoxville, TN

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AGRICULTURAL MARKETING SERVICE—Continued

Year	Savings	Office closures	Locations
	1,032,000	Meat Grading	Arlington, TX
	2,378,000		
1994	278,000	Meat Grading	Bell, CA
	68,000	Livestock & Grain Market News	Visalia, CA
	135,000	Livestock & Grain Market News	Natl. Stockyards, IL
	13,000	Fresh Fruit & Vegetable Grading	Indianapolis, IN
	23,000	Fresh Fruit & Vegetable Grading	Fort Mitchell, KY
	249,000	Poultry Market News	Kansas City, MO
	350,000	Cotton Grading	Greenwood, MS
	71,000	Fresh Fruit & Vegetable Grading	Buffalo, NY
	55,000	Fresh Fruit & Vegetable Grading	Wilkes Barre, PA
	37,000	Fresh Fruit & Vegetable Grading	Warwick, RI
	6,000	Fresh Fruit & Vegetable Grading	Memphis, TN
	16,000	Fresh Fruit & Vegetable Grading	El Paso, TX
	316,000	Cotton Grading	Waco, TX
	6,000	Fresh Fruit & Vegetable Grading	Salt Lake City, UT
	44,000	Fresh Fruit & Vegetable Grading	Norfolk, VA
	14,000	Milk Marketing Administrators	Germantown, WI
	21,000	Milk Marketing Administrators	Stevens Point, WI
	1,702,000		
1995	33,000	Fresh Fruit & Vegetable Grading	Sacramento, CA
	20,000	Poultry Grading	Denver, CO
	32,000	Poultry Grading	Valrico, FL
	61,000	Poultry Grading	Des Moines, IA
	215,000	Fresh Fruit & Vegetable Grading	Glen Ellyn, IL
	39,000	Poultry Grading	West Lafayette, IN
	90,000	Fruit & Vegetable Market News	New Orleans, LA
	22,000	Poultry Grading	Augusta, ME
	60,000	Livestock & Grain Market News	Albany, NY
	319,000	Cotton Grading	Altus, OK
	346,000	Cotton Standardization	Clemson, SC
	9,000	Poultry Grading	Columbia, SC
	193,000	Meat Grading	Arlington, TX
	373,000	Cotton Grading	El Paso, TX
	117,000	Fresh Fruit & Vegetable Grading	Falls Church, VA
	1,929,000		
1996	100,000	Meat Grading	Des Moines, IA
	34,000	Poultry Market News	Glen Ellyn, IL
	.....	Fruit & Vegetable Market News	Presque Isle, ME
	45,000	Livestock & Grain Market News	West Fargo, ND
	95,000	Poultry Market News	Edison, NJ
	10,000	Fruit & Vegetable Market News	Rochester, NY
	20,000	Fruit & Vegetable Market News	Cincinnati, OH
	3,000	Milk Market Administrators	Columbus, OH
	.....	Cotton Grading	Harlingen, TX
	.....	Fruit & Vegetable Market News	McAllen, TX
	307,000		
1997	.....	Fruit & Vegetable Market News	Nogales, AZ
	5,000	Fruit & Vegetable Market News	Inwood, WV
	5,000		

Cumulative savings are expected in the outyears.

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ANIMAL AND PLANT HEALTH INSPECTION SERVICE

Year	Savings	Office closures	Locations
1993	\$15,000	Plant Protection & Quarantine	Mobile, AL
	77,000	Plant Protection & Quarantine	Tifton, GA
	47,000	Plant Protection & Quarantine	Hanna, IN
	164,000	Plant Protection & Quarantine	Fairmont, NC
	217,000	Plant Protection & Quarantine	Fayetteville, NC
	547,000	Plant Protection & Quarantine	Lumberton, NC
	21,000	Plant Protection & Quarantine	Wallace, NC
	22,000	Plant Protection & Quarantine	Florence, SC
	574,000	Plant Protection & Quarantine	Brentwood, TN
	15,000	Veterinary Services	Puerto Rico
		<u>1,699,000</u>	
1994	12,000	Veterinary Services	Bartow, FL
	23,000	Veterinary Services	Okeechobee, FL
	12,000	Plant Protection & Quarantine	Oakbrook, IL
	12,000	Veterinary Services	Alexandria, LA
	160,000	Plant Protection & Quarantine	Chestertown, MD
	454,000	Animal Care	Minneapolis, MN
	454,000	Investigative & Enforcement	Minneapolis, MN
	451,000	Plant Protection & Quarantine	North Platte, NE
	160,000	Plant Protection & Quarantine	Batavia, NY
	285,000	Plant Protection & Quarantine	Dillon, SC
	<u>2,300,000</u>		
1995	12,000	Veterinary Services	Gainesville, FL
	121,000	Plant Protection & Quarantine	Dublin, GA
	101,000	Plant Protection & Quarantine	Alexandria, LA
	120,000	Plant Protection & Quarantine	St. Peters, MO
	128,000	Plant Protection & Quarantine	Meadville, PA
	129,000	Plant Protection & Quarantine	Clarion, PA
	133,000	Plant Protection & Quarantine	Jacksonville, TX
	15,000	Plant Protection & Quarantine	Levelland, TX
	9,000	Plant Protection & Quarantine	Ralls, TX
	101,000	Veterinary Services	Charleston, WV
	97,000	Veterinary Services	Puerto Rico
	589,000	Veterinary Services	Puerto Rico
	11,000	Veterinary Services	Puerto Rico
921,000	Veterinary Services	Puerto Rico	
	<u>2,747,000</u>		
1996	160,000	Investigative & Enforcement	Sacramento, CA
	80,000	Investigative & Enforcement	Tampa, FL
	71,000	Animal Damage Control	Twin Falls, ID
	<u>311,000</u>		
1997	.....	Plant Protection & Quarantine	Winter Haven, FL
	.....	Plant Protection & Quarantine	Brookhaven, MS

Cumulative savings are expected in the outyears.

GRAIN INSPECTION, PACKERS AND STOCKYARDS ADMINISTRATION

Year	Savings	Office closures	Locations
1994	\$69,000	PSA Regional Office	Portland, OR
1995	102,000	FGIS Suboffice	West Memphis, AR
	221,000	FGIS Field Office	Peoria, IL
	298,000	FGIS Suboffice	Indianapolis, IN
	<u>415,000</u>	FGIS Field Office	Omaha, NE

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GRAIN INSPECTION, PACKERS AND STOCKYARDS ADMINISTRATION—Continued

Year	Savings	Office closures	Locations
	182,000	FGIS Field Office	Houston, TX
	104,000	FGIS Field Office	Plainview, TX
	<u>1,391,000</u>		
1996		FGIS Suboffice	Savannah, GA

Cumulative savings are expected in the outyears.

FOOD SAFETY AND INSPECTION SERVICE

Year	Savings	Office closures	Locations
1993		Compliance Office	Charleston, WV
1995		Import Office No. 7	New Orleans, LA
		Import Office No. 1	Boston, MA
		Import Office No. 4	Baltimore, MD
		Import Office No. 5	Charleston, SC
		Training Development	Denton, TX
		Import Office No. 6	Puerto Rico
1996		Egg Products Inspection	Gastonia, NC
		Salmonella Enteritidis	Lancaster, PA

Cumulative savings are expected in the outyears.

FOOD AND CONSUMER SERVICE

Year	Savings	Office closures	Locations
1994	\$79,800	Satellite Office	El Paso, TX
1995		Satellite Office	Mobile, AL
	65,400	Satellite Office	Tuscaloosa, AL
		Satellite Office	New Orleans, LA
	122,300	Satellite Office	Knoxville, TN
		Satellite Office	Memphis, TN
	123,000	Satellite Office	Corpus Christi, TX
	23,900	Satellite Office	San Antonio, TX
	21,400	Field Office	Alexandria, VA
	<u>356,000</u>		
1996	21,100	Satellite Office	Shawanno, WI

Cumulative savings are expected in the outyears.

FOREST SERVICE

Year	Savings	Office closures	Locations
1993		Rita Blanca National Grasslands	Texline, TX
1994	\$644,000	La Porte Ranger District	Challenge, CA
	455,000	Greenville Ranger District	Greenville, CA
	600,000	Willow Springs Ranger District	Willow Springs, MO
	300,000	Edgefield Ranger District	Edgefield, SC
	300,000	Lone Cane Ranger District	Greenwood, SC
	<u>2,299,000</u>		
1995	300,000	Biloxi Ranger District	McHenry, MS
	205,300	Mayhill Ranger District	Mayhill, NM
	17,000	Forestry Resources Laboratory	University Park, PA
	160,000	Forestry Science Laboratory	Madison, WI

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FOREST SERVICE—Continued

Year	Savings	Office closures	Locations
	682,300		
1996	250,000	Institute of Northern Forestry	Fairbanks, AK
		Milford Ranger District	Milford, CA
		Forestry Science Laboratory	Gainsville, GA
		Southern Forestry Fire Lab.	Macon, GA
		Moose Creek Ranger District	Grangeville, ID
		Forestry Science Laboratory	Carbondale, IL
		Forestry Science Laboratory	Orono, ME
		Forestry Science Laboratory	Gulfport, MS
	30,000	Deerlodge National Forest	Butte, MT
	20,000	Glacier View Ranger District	Columbia Falls, MT
	280,000	Fisher Ranger District	Libby, MT
		Bend Silviculture Laboratory	Bend, OR
	300,000	San Jacinto Ranger District	Cleveland, TX
	300,000	Tenaha Ranger District	San Augustine, TX
	1,180,000		
1997		Mancos Ranger District	Mancos, CO
		North Fork Ranger District	Orofino, ID

Cumulative savings are expected in the outyears.

OFFICE OF THE GENERAL COUNSEL

Year	Savings	Office closures	Locations
1996		Legal Services	Jackson, MS
		Legal Services	Lincoln, NE
		Legal Services	Raleigh, NC
		Legal Services	Stillwater, OK
		Legal Services	Puerto Rico

Cumulative savings are expected in the outyears.

OFFICE OF THE INSPECTOR GENERAL

Year	Savings	Office closures	Locations
1994	\$5,000	Audit Residency Office	Huron, SD
1995	4,000	Audit Residency Office	Little Rock, AR

Question. Please provide the Committee with a consolidated list, by USDA agency, of proposed program and project terminations. Reflect funds for fiscal years 1996, 1997, and 1998.

Answer. A list of proposed program and project terminations proposed by ARS in fiscal year 1998 will be provided for the record.

[The information follows:]

U.S. DEPARTMENT OF AGRICULTURE, AGRICULTURAL RESEARCH SERVICE PROPOSED FISCAL YEAR 1998 PROJECT TERMINATIONS

Location/Research project	Fiscal year—		
	1996 actual	1997 estimate	1998 estimate
CALIFORNIA			
Albany:			
Flavor Optimization of Major Food Crops through Control of Metabolic Processes			\$357,600
Modification of Vegetable Oils as Raw Materials for Industrial Uses			681,900
In Vitro Creation & Commercialization of High Solids Tomatoes & High-Solids, Low Sugar Potatoes			398,900
New Bacterial Polysaccharides for Food & Industry			324,200
Novel Biopolymers Based on Agricultural Sources			282,500

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U.S. DEPARTMENT OF AGRICULTURE, AGRICULTURAL RESEARCH SERVICE PROPOSED FISCAL YEAR 1998 PROJECT TERMINATIONS—Continued

Location/Research project	Fiscal year—		
	1996 actual	1997 estimate	1998 estimate
Biological Control of Yellow Starthistle and Other Nonindigenous Plant Pests in Western US			88,200
Quality Assurance of Food Products from Livestock Grazing Rangeland Weeds	\$352,421		
Total for Albany, CA	352,421		2,133,300
Fresno: Shallow Groundwater Management Systems for Arid Irrigated Areas			245,700
Total for Fresno, CA			245,700
Brawley: Crop Irrigation Research in the Imperial Valley			321,000
Total for Brawley, CA			321,000
COLORADO			
Ft. Collins:			
Global Change Research, Decision Support, Modeling, and Database Management			727,500
Development of Improved Cropping System Models & Technology for Sustainable Production			158,400
Development of a Decision Support System for Farmers and Ranchers in the Great Plains			80,000
Global Change Research, Modeling, and Database Management with Emphasis on Terrestrial Systems		\$218,600	
Total for Ft. Collins, CO		218,600	965,900
FLORIDA			
Canal Pt.: Plant Resistance and Biological Control in Sugarcane Insect Pest Management		148,300	
Total for Canal Point, FL		148,300	
Gainesville:			
Management of Termites as Urban Pests in the American Pacific			144,100
Modeling & Simulation of Integrated Mgt System for Arthropods of Medical & Veterinary Importance Mgt of Termites		328,300	
Total for Gainesville, FL		328,300	144,100
GEORGIA			
Athens:			
Reproductive Physiology-Pollen-Pistil Interaction Leading to Fertilization	194,541		
Genetic Determinants & Limits to Selection for Growth in Poultry		181,800	
Reducing Rust-Induced Losses to Small Grains		153,000	
Total for Athens, GA	194,541	334,800	
Tifton:			
Reduction of Synthetic Chemical Residues on Cured Leaf and Screening of Nicotina	37,883		
Cultural Practices, Environmental Stresses & Germplasm Enhancement of Brassica Oilseed SPP		147,400	
Automated Growing & Transplanting Systems for Plant Seedlings		151,700	
Total for Tifton, GA	37,883	299,100	

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U.S. DEPARTMENT OF AGRICULTURE, AGRICULTURAL RESEARCH SERVICE PROPOSED FISCAL YEAR 1998 PROJECT TERMINATIONS—Continued

Location/Research project	Fiscal year—		
	1996 actual	1997 estimate	1998 estimate
HAWAII			
Hilo: Aquaculture Productivity Research Phase II			1,612,400
Total for Hilo, HI			1,612,400
IDAHO			
Aberdeen: Development & Use of Molecular Techniques in Oat Enhancement			160,700
Total for Aberdeen, ID			160,700
ILLINOIS			
Peoria:			
Animal Health Consortium			919,800
Exploratory Thermal Chemical Conversion of Starch to Enhance Derivatization			161,700
Enhanced Use of Plant Proteins: Identifying, Isolating and Relating Structures to Properties			577,900
Genetic Engineering of Anaerobic Bacteria for Improved Rumen Function			490,800
Plant Defense via Lipoygenase Pathway Enzymes	410,776		
Total for Peoria, IL	410,776		2,150,200
Urbana:			
Reduced Herbicide Inputs for Effective Weed Management Systems to Improve Water Quality			185,700
Sensors and Systems for Site-Specific Crop Management to Improve Environmental Quality			229,200
Soybean Diseases			344,100
Total for Urbana, IL			759,000
IOWA			
Ames:			
Limits to Digestibility & Interactions Among Quality, Growth, & Persistence of Forages			171,000
Genetic Characterization of Soybean Germplasm			178,900
Total for Ames, IA			349,900
KANSAS			
Manhattan: Protecting Hard Red Winter Wheat from Biotic Stress			250,000
Total for Manhattan, KS			250,000
LOUISIANA			
New Orleans:			
Improving Sugarcane Productivity by Conventional and Molecular Approaches to Genetic Development			233,300
Disease and Insect Control Mechanisms for the Enhancement of Sugarcane Germplasm Resistance			83,400
Developing Integrated Weed Management Systems for Efficient and Sustainable Sugarcane Production			83,300
Pesticide Formulation for Protection of Environmental Quality	376,646		
Total for New Orleans, LA	376,646		400,000

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U.S. DEPARTMENT OF AGRICULTURE, AGRICULTURAL RESEARCH SERVICE PROPOSED FISCAL YEAR 1998 PROJECT TERMINATIONS—Continued

Location/Research project	Fiscal year—		
	1996 actual	1997 estimate	1998 estimate
MAINE			
Orono: Research on Soil & Water Conservation for Potato Production in the Northeast			135,500
Total for Orono, MA			135,500
MARYLAND			
Beltsville:			
Ecologically-Based Technologies for Controlling Ixodes Scapularis & Reducing Lyme Disease			175,200
Remote Sensing & Associated Technologies for Production Decisions ...			206,100
Stability/Maturity/Safety of Composts and Organic Residuals: Criteria and Tests for Agriculture			281,700
Automated Firmness Classification of Apples			378,600
Production & Evaluation of Tissue-Cultured Fruit Crops			237,900
National Turfgrass Evaluation Program			55,300
Genetic Modification of Soybean Inoculants to Improve Their Effectiveness			171,800
Molecular Genetics of Populations of Fungi Important in Biological Control			182,300
Reduction of Chilling Injury by Techniques Safe for Food Consumption			454,000
Systematics of Agriculturally Important Grasses Related to Sugarcane	153,708		
Modeling Soil Processes in Two Dimensions		71,700	
Investigate Mechanisms by Which Hormones Affect Synthesis of Milk Casein		380,400	
Integrated Management of Rhizoctonia Seedling Disease in Alfalfa		183,400	
Exploitation of Host-Parasite Factors For Regulation of Pest Insects		555,600	
Total for Beltsville	153,708	1,191,100	2,142,900
MICHIGAN			
East Lansing:			
Innovation Technology to Improve the Production and Handling of Vegetables			222,200
Crop/Animal Systems to Improve Nutrient Management and Sustainability of Dairy Farms			170,800
Total for East Lansing, MI			393,000
MINNESOTA			
St. Paul: Germplasm Evaluation and Genetic Improvement of Oats and Wild Rice			147,000
Total for St. Paul, MN			147,000
MISSISSIPPI			
Stoneville: Agronomic and Economic Evaluation of Kenaf as a Field Crop in Mississippi			491,500
Total for Stoneville, MS			491,500
MISSOURI			
Columbia: Surface and Subsurface Hydrology for Watersheds with Limited Relief			393,200
Total for Columbia, MO			393,200

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U.S. DEPARTMENT OF AGRICULTURE, AGRICULTURAL RESEARCH SERVICE PROPOSED FISCAL YEAR 1998 PROJECT TERMINATIONS—Continued

Location/Research project	Fiscal year—		
	1996 actual	1997 estimate	1998 estimate
NEBRASKA			
Clay: Influence of Gastrointestinal Neuroendocrine Peptides on Food Intake & Swine Growth			208,400
Total for Clay Center, NE			208,400
Lincoln: Biology and Control of Virus Diseases of Sorghum			143,100
Total for Lincoln, NE			143,100
NEW YORK			
Ithaca:			
Entomopathogenic Fungi as Biocontrol Agents of Pest Insects of Agricultural Crops			50,000
Agricultural Sustainability and Stress Adaptation: Role of Differential Root Development			221,100
Total for Ithaca, NY			271,100
NORTH CAROLINA			
Raleigh:			
Enhancement of Roasted Peanut Flavor Intensity Using Genetic Resources			285,800
Factors Responsible for Control of the Textural Properties of Processed Sweetpotato Products			217,200
Evaluation of Temperate Legumes and Warm-Season Grass Mixtures in Sustainable Production Systems			374,200
Impact of Environmental Factors and Genetic Variability on Photosynthesis	182,375		
Effects of Environment on Weed/Crop Competition and Competitive Ability	117,777		
Identification Treatments to Reduce Pesticide	122,677		
Total for Raleigh, NC	422,829		877,200
NORTH DAKOTA			
Fargo: The Genetics of Natural Insect Population & Modern Methods		288,200	
Total for Fargo, ND		288,200	
Mandan: Genetic Improvement of Trees For Soil & Water		191,600	2,335,200
Total for Mandan, ND		191,600	2,335,200
OHIO			
Wooster: Development of Soybean Germplasm & Production Systems for High Yield & Drought Prone Environments			210,100
Total for Wooster, OH			210,100
OKLAHOMA			
Stillwater: Improving Resistance of Peanut to Biological Stress Through Germplasm & Cultural Enhancement			150,000
Total for Stillwater, OK			150,000
OREGON			
Corvallis:			
Characterization of Environment & Nutritional Induced Cytokinin Changes in Wheat			214,800

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U.S. DEPARTMENT OF AGRICULTURE, AGRICULTURAL RESEARCH SERVICE PROPOSED FISCAL YEAR 1998 PROJECT TERMINATIONS—Continued

Location/Research project	Fiscal year—		
	1996 actual	1997 estimate	1998 estimate
Partitioning of Photosynthate as Influenced by Genotype, Mycorrhizae & Air Enriched with CO ₂			175,800
On-Farm Grass Straw Utilization Development			215,200
Germplasm Enhancement and Cultivar Development of Blackberry, Strawberry, Blueberry and Raspberry			325,000
Total for Corvallis, OR			930,800
PENNSYLVANIA			
University Park: The Role of Variability in the Distributed Process Modeling of Soil Water			384,300
Total for University Park, PA			384,300
Wyndmoor:			
Value-Added Products from Fruit & Vegetable Processing Wastes			691,500
Nutrient Uptake by Plant Roots from Soils	654,564		
Total for Wyndmoor, PA	654,564		691,500
PUERTO RICO			
Mayaguez: Transferring Technology for Improvement of Agriculture in P.R. and other Countries			158,700
Total for Mayaguez, PR			158,700
TEXAS			
College Station: Biological Control of Horn Flies in Pasture Ecosystems			221,500
Total for College Station, TX			221,500
Weslaco: Development of Improved Cultivars and Efficient Cultural Practices for Kenaf & Crotalaria			343,900
Total for Weslaco, TX			343,900
WASHINGTON			
Prosser: Research to Improve Crop Production Efficiencies through Germplasm Enhancement & Cultural Management Technologies			1,436,700
Total for Prosser, WA			1,436,700
Pullman:			
Genetically Enhanced Wheat for Quality Productivity and Resistance to Biotic & Abiotic Stresses			146,100
Biochemical and Molecular Regulation of Preharvest Sprouting and Grain Dormancy in Wheat			67,200
Control of Foliar Diseases and Smuts of Wheat			136,700
Total for Pullman, WA			1,786,700
HEADQUARTERS			
Floriculture			200,000
Control of Perennial/Annual Weeds (Narcotics)	1,500,000		
Drug Abuse in Rural America	100,000		
Umbrella for Funding Kenaf, Crambe & Rapeseed Cooperative Agreements ..		150,300	
An Engineering Feasibility Study To Provide Design & Cost Estimates For An Ethanol Pilot Plant		496,500	

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U.S. DEPARTMENT OF AGRICULTURE, AGRICULTURAL RESEARCH SERVICE PROPOSED FISCAL YEAR
1998 PROJECT TERMINATIONS—Continued

Location/Research project	Fiscal year—		
	1996 actual	1997 estimate	1998 estimate
Total for Headquarters	1,600,000	646,800	200,000
Subtotal Terminations	4,203,368	3,646,800	22,107,800
MANAGEMENT			
Management Savings (Athens, GA)			365,200
Management Savings			550,000
Program/Administrative Management Support	467,032		
GRAND TOTAL	4,670,400	3,646,800	23,023,000

DEPARTMENTWIDE OBLIGATIONS

Question. Please provide a summary of obligations, Department-wide, for each of fiscal years 1996–1998, for the following object classifications: salaries and benefits; travel; ADP hardware/software purchases; contracts, grants, and other extramural agreements; and equipment (other than ADP related).

Answer. The following table provides an estimate of the obligations for 1996, 1997 and the 1998 budget in millions of dollars, excluding the Forest Service:

[Dollars in millions]

Object class	1996 estimate	1997 estimate	1998 budget
Salaries & benefits	\$5,103	\$5,302	\$5,345
Travel	240	216	210
ADP hardware/software purchases	184	136	94
Contracts, grants & other extramural agreements	51,064	51,737	52,313
Equipment (other than ADP related)	85	90	75

Question. Please provide the Committee with a consolidated listing of obligations for fiscal years 1996–1998 for the following crosscutting program activities: civil rights enforcement; support for 1890 Institutions and Historically Black Colleges and Universities; pest management; food safety; nutrition (excluding benefits); USDA information activities; Congressional relations and legislative affairs offices; natural resources and environmental programs; and management activities to support Department programs.

Answer. The following table contains the information. Please note the amounts are dollars in millions.

[Dollars in millions]

Activities	1996 estimate	1997 estimate	1998 budget
Civil rights enforcement	\$12	\$13	\$14
1890 Institutions & HBCU	90	88	93
Pest management	204	216	249
Food safety	771	806	826
Nutrition	424	408	446
Congressional relations & legislative affairs offices	51	52	52
Natural resources & environment programs	3,387	3,550	3,672
Management activities to support Department programs	147	138	148

Question. Please provide the Committee a Department-wide table reflecting total staff-years and funding for fiscal years 1993, and 1996–98 for the following position classifications: Executive Senior Service positions; personnel specialists; computer specialists; budget analysts; program analysts; contract specialists; accountants and technicians; administrative; and economists.

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Positions	1993 estimate		1996 estimate		1997 estimate		1998 estimate	
	Staff years	Funds (000)						
Senior Executive Service	389	\$40,984	352	\$39,286	339	\$38,814	343	\$40,574
Personnel Specialists	1,542	74,740	1,228	69,592	1,214	71,603	1,208	71,177
Computer Specialist	2,651	127,636	2,526	335,888	2,443	134,036	2,366	126,964
Budget Analysts	664	32,806	643	34,298	625	34,654	614	34,111
Program Analysts	618	33,050	793	44,551	723	44,721	594	33,917
Contract Specialists	884	43,092	754	38,491	704	40,419	677	37,786
Accountants/Technicians	2,242	93,880	1,814	85,811	1,715	85,521	1,692	83,220
Administrative	3,590	129,132	2,785	132,720	2,750	129,828	2,611	119,219
Economists	791	53,257	683	50,477	657	50,303	653	51,405

GOVERNMENT PERFORMANCE REVIEW ACT

Question. The Department have been involved in compliance with the Government Performance Review Act (GPRA) requirements, including the development of strategic plans, goals, performance measurements, etc. By USDA agency, please document staff years and obligations (including salaries, travel, contracts, training, etc.) incurred to date by fiscal year, in accomplishing this effort. How much is included in the fiscal year 1998 budget request for this purpose.

Answer. The information follows:

UNITED STATES DEPARTMENT OF AGRICULTURE STAFF YEARS AND OBLIGATIONS FOR GPRA

[Dollars in thousands]

Agency	1995		1996		1997		1998	
	SY	Funds	SY	Funds	SY	Funds	SY	Funds
Farm and Foreign Agricultural Services:								
Farm Service Agency	1.00	\$50	4.00	\$200	46.00	\$2,695	74.00	\$3,048
Risk Management Agency	2.00	97	5.00	210	12.00	571	8.00	366
Foreign Agricultural Service	4	260	4	268	5	345	5	355
Rural development¹	1.50	190	1.00	82	1.50	168	1.50	172
Rural Utilities Service	(¹)	(^{1})	(^{1})	(^{1})	(^{1})	(^{1})	(^{1})	(^{1})
Rural Housing Service	(¹)	(^{1})	(^{1})	(^{1})	(^{1})	(^{1})	(^{1})	(^{1})
Rural Business-Cooperative Service	(¹)	(^{1})	(^{1})	(^{1})	(^{1})	(^{1})	(^{1})	(^{1})
Food, Nutrition, and Consumer Services:								
Food and Consumer Service	1.25	100	2.00	160	3.25	293	6.50	585
Natural Resources and Environment:								
Natural Resources Conservation Service	5.50	590	39.00	3,048	43.00	3,409	40.00	3,015
Food Safety:								
Food Safety and Inspection Service	1.00	73	3.00	219	4.00	301	5.00	387
Research, Education, and Economics:								
Agricultural Research Service	1.60	124	1.60	128	1.60	133	1.70	138
Cooperative State Research, Education, and Extension Service	1.51	119	1.27	135	1.28	225	2.10	302
Economic Research Service	2.00	130	2.00	133	2.00	137	2.00	139
National Agricultural Statistics Service ..	1.06	115	1.05	121	1.45	164	1.86	179
Marketing and Regulatory Programs:								
Animal and Plant Health Inspection Service	3.00	226	4.00	291	3.00	240	3.00	131
Agricultural Marketing Service	6.96	966	9.76	746	10.01	1,008	7.86	565
Grain Inspection, Packers and Stockyards Administration	4.50	338	4.70	376	5.40	459	5.40	486
Administration:								
Office of the Secretary								
Office of the Chief Economist			0.57	55	0.57	57	0.57	58
National Appeals Division			0.25	23	0.25	24	0.25	25
Office of Budget and Program Analysis	0.07	3	0.07	3	0.07	3	0.07	3
Office of Small & Disadv. Bus. Utilization			0.25	24	0.25	25	0.25	26
Chief Information Officer								
Chief Financial Officer			2.50	211	2.50	187	3.00	191

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UNITED STATES DEPARTMENT OF AGRICULTURE STAFF YEARS AND OBLIGATIONS FOR GPRA—
Continued
[Dollars in thousands]

Agency	1995		1996		1997		1998	
	SY	Funds	SY	Funds	SY	Funds	SY	Funds
Office of Communications	1.00	20	1.00	21	1.00	21	1.00	21.87
Office of the Inspector General	0.50	32	0.60	42	0.80	60	8.00	62
Office of the General Counsel	0.05	9	0.07	14	0.10	20	0.10	21
Departmental Administration			1.00	79	3.00	203	2.00	167
Subtotal, GPRA	38.50	3,442	88.69	6,588	148.03	10,748	179.16	10,443
Forest Service								
Total, GPRA	38.50	3,442	88.69	6,588	148.03	10,748	179.16	10,443

¹ Data provided for mission area, not for agencies.

EMPLOYEE DETAILS/ASSIGNMENTS

The fiscal year 1997 appropriations act specifies that “No employee of the Department of Agriculture may be detailed or assigned to any agency or office funded by this Act to any other agency or office of the Department for more than 30 days unless the individual’s employing agency or office is fully reimbursed by the receiving agency or office for the salary or expenses of the employee for the period of assignment.”

Question. Has the USDA Office of General Counsel issued any opinions, interpretations, or guidance to USDA agencies relative to this statutory provision? If so, what? Please submit for the record any written opinions or communications and summaries of oral communications issued.

Answer. The Office of the General Counsel has issued no written opinions or memorandum generally addressing the limitation on employee details contained in section 730 of the Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 1997, or the parallel provision also applying to USDA contained in the Interior portion of the fiscal year 1997 Omnibus Consolidated Appropriations Act. Attorneys from OGC have advised Department officials as to how those provisions should be interpreted. Simply stated, that advice has been that employees may not be detailed from any agency or office of the Department to any other such agency or office for more than 30 days without reimbursement to the employing agency or office. However, we have also recognized that, under the law, so long as an employee is performing duties for which any agency or office receives appropriations, the employee may be paid from the appropriation for that agency or office no matter where the employee is geographically or physically located.

Question. Please provide the Committee with a list, by agency, of each employee detail or assignment (by employing agency, title, and position) in each of fiscal years 1996 and 1997 for a period up to 30 days, and identify the agency to which that detail or assignment was made, its length, and the purpose of the detail/assignment. Provide this same information for employee details/assignments made for a period of more than 30 days, and indicate the dollar amount of reimbursement made to the employing agency for such detail/assignment.

Answer. The information follows:

DETAILED FOR LESS THAN 30 DAYS—FISCAL YEAR 1997

Position/agency	Detailed to	Date/length	Purpose
Agr. Economist (FAS)	FAS	10/1/96-11/1/96	Technical assistance—Nicaragua.
Program Analyst (FCS)	Under Secretary, FNCS	10/1/96-10/26/96	Support for FCS programs.
Conf. Asst. to Adm. (FCS)	Office of Public Affairs	10/1/96-10/27/96	Write speeches for the Secretary of Agriculture.
Policy Analyst (FCS)	Dept. of Treasury	10/1/96-10/12/96	Assist the leader of the Electronic Benefits Task Force.
Budget Officer (FCS)	Modernization of Administrative Processes (MAPP)	10/1/96-10/12/96	Analyze telecommunication activities.
Writer (FCS)	Under Secretary, FNCS	10/1/96-10/25/96	Write speeches, letters, etc.
Secretary (FCS)	OSEC	1/21/97-2/21/97	Secretarial support.
Secretary (NRCS)	Under Secretary, NRE	11/8/96-12/5/96	Clerical support.
Contracting Specialist (NRCS)	OO and GSA	12/16/96-1/31/97	WEL—Gain managerial experience.
Confidential Assistant (NRCS)	FSA	2/18/97-3/16/97	Assist at the Field Service Center.
Program Analyst (RMA)	OBPA	10/1/96-10/31/96	Experience at Dept. level.
Management Analyst (FS)	Under Secretary, NRE	10/1/96-10/31/96	Provide support.
Writer (FS)	Under Secretary, NRE	10/1/96-10/31/96	Provide support.
Writer (FS)	Office of Civil Rights	10/1/96-10/31/96	Provide support.

DETAILED FOR MORE THAN 30 DAYS—FISCAL YEAR 1997

Position/agency	Detailed to	Date/length	Purpose	Reimbursed
Foreign Agr. Affairs Officer (FAS)	Calif. Dept of Agr.	2 years	IPA—Outreach	None.
Foreign Agr. Affairs Officer (FAS)	Iowa Dept. of Agr.	2 years	TDY—Outreach	None.
Foreign Agr. Affairs Officer (FAS)	Oregon Dept. of Agr.	2 years	IPA—Outreach	None.
Export Outreach Specialist (FAS)	Calif. Dept. of Agr.	2 years	TDY—Outreach	None.
Foreign Agr. Affairs Officer (FAS)	UN FAO	2 years	Outreach	None.
Agr. Marketing Specialist (FAS)	U.S. Trade and Development Agency	2 years	Outreach	None.
Foreign Agr. Affairs Officer (FAS)	World Bank	2 years	Outreach	None.
Foreign Agr. Affairs Officer (FAS)	Peace Corps, Albania	2 years	Outreach	None.
Agr. Marketing Specialist (FAS)	Congressional Fellowship	1 year	Professional Development	None.
Executive Assistant (RHS)	FSA	10/1/95-9/30/97	Resolution of outstanding large farm loans	\$130,089 in fiscal year 1997.
Financial Analyst (RHS)	FAS	10/1/95-9/30/97	Assist AID in revitalizing rural infrastructure	\$81,000 in fiscal year 1997.
Special Asst. to Adm. (RHS)	USDA Civil Rights	10/27/96-9/30/97	Civil rights activities	\$99,545 in fiscal year 1997.
Conf. Asst. to Adm. (RHS)	FCS	9/17/96-2/28/97	Scheduling and office management	\$42,195 in fiscal year 1997.
Service Center Oper. Dir. (RBS)	Field Service Center Team	10/17/95-9/30/97	Implement the Field Service Centers	None.
Deputy Asst. Adm. (RHS)	FSA	7/1/96-9/30/97	Farm loan portfolio problem cases	On FSA payroll.
Confidential Assistant (RHS)	Office of Congressional Affairs	2/28/96-1/18/97	Serve as policy advisor	\$16,964 in fiscal year 1997.
Secretary (RHS)	Under Secretary, RD	3/4/96-9/30/97	Clerical assistance	None.

DETAILED FOR MORE THAN 30 DAYS—FISCAL YEAR 1997—Continued

Position/Agency	Detailed to	Date/length	Purpose	Reimbursed
Staff Assistant (RHS)	Under Secretary, RD	10/1/95-9/30/97	Staff assistance	None.
Conf. Asst. to Adm. (RHS)	White House	4/1/96-9/30/97	Assist the Office of Presidential Personnel	(1)
Conf. Asst. to Adm. (RHS)	White House	12/14/96-9/30/97	Assist the Office of Presidential Personnel	(1)
Conf. Asst. to Adm. (RHS)	White House	1/20/97-9/30/97	Assist the Office of Presidential Personnel	(1)
Grants Management Specialist (FCS)	Dept. of Justice	10/1/96-1/3/97	Support to the Financial Crime Enforcement Network	None.
Financial Management Specialist (FCS)	Dept. of Treasury	10/1/96-2/8/97	Assistance to the EBT Task Force	None.
Special Assistant (FCS)	OCFO	10/1/96-9/30/97	Special financial project	\$1,084,424.
Senior Budget Analyst (FCS)	Under Secretary, FNCS	10/1/96-3/25/97	Budget and legislative support	\$5,518.
Conf. Asst. to Adm. (FCS)	Under Secretary, FNCS	10/1/96-2/24/97	Administrative support	None.
Conf. Asst. to Adm. (FCS)	Under Secretary, FNCS	10/1/96-5/28/97	Legislative support	None.
Accounting Officer (FCS)	OCFO	10/1/96-9/30/97	Work on a special financial project	\$63,316.
Staff Assistant (FCS)	Under Secretary, FNCS	10/1/96-3/30/97	Administrative support to the Deputy Under Secretary	\$3,754.
Program Specialist (FCS)	Dept. of Health, Commonwealth of Puerto Rico.	10/1/96-12/31/96	IPA—Develop and help implement a vendor selection system for WIC.	\$15,186.
Accountant (FCS)	Dept. of Health, Commonwealth of Puerto Rico.	2/25/97-1/3/97	IPA—Assist in reorganizing WIC	\$39,593.
Supervisory Program Specialist (FCS)	Calif. Dept. of Education	3/10/97-8/31/97	IPA—Assistance on the Summer Food Service Program	None.
Program Specialist (FCS)	New Mexico Dept. of Health	10/1/96-2/27/97	IPA—Assistance on WIC and CSPF	\$16,715.
Executive Assistant (FCS)	Texas Dept. of Health	10/1/96-6/5/97	IPA—Assistance on Civil Rights and EEO	\$15,320.
Program Analyst (FCS)	Office of Communication	10/1/96-9/30/97	Work on FCS AmeriCorps Program	None.
Systems Accountant (FCS)	OCFO	10/1/96-9/30/97	Edit and complete USDA's Accounting Standards Manual	\$7,420.
Program Manager (FCS)	Dept. of Health and Human Services	10/14/96-10/13/97	Analyze the impact of Self-Governance on Tribal Health Programs	\$40,111.
Program Analyst (FCS)	N. Car. Dept. of Environment, Health, and Natural Resources.	10/14/96-10/10/98	IPA—Assist on several food assistance programs	\$82,481.
Supervisory Program Analyst (FCS)	OMB	10/1/96-11/22/96	OMB's Career Development Exchange Program	None.
Secretary (FCS)	Under Secretary, FNCS	10/1/96-3/30/97	Secretarial support	\$4,950.
Program Manager (NRCS)	CSREES	10/1/96-3/19/97	Program support and assistance	\$83,271.
Program Manager (NRCS)	OPM	10/2/96-Present	Policy and program guidance	\$14,514.
Computer Specialist (NRCS)	Under Secretary, NRE	12/1/96-2/10/97	Technical advice on automated technology	\$7,697.
Contracting Specialist (NRCS)	OO	2/1/97-4/21/97	Purchase Card Implementation Team	\$3,899.
Contracting Specialist (NRCS)	OBPA	12/16/97-1/31/97	WEL—To gain managerial experience	None.
Management Analyst (NRCS)	Office of Communication	4/2/95-2/2/97	Ameri-Corp issues	\$70,000.
Secretary (NRCS)	Under Secretary, NRE	7/17/96-10/23/97	Clerical support	None.
Program Specialist (NRCS)	Under Secretary, NRE	5/30/96-3/15/97	To provide assistance	None.

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Program Specialist (NRCS)	Under Secretary, NRE	8/22/96-2/1/97	To provide assistance	None.
Program Specialist (NRCS)	Under Secretary, NRE	5/1/96-10/20/96	To provide assistance	None.
Program Specialist (NRCS)	Under Secretary, NRE	3/24/96-3/16/97	To provide assistance	None.
Secretary (FS)	Under Secretary, NRE	10/1/96-11/8/96	To provide support	None.
Secretary (FS)	Assistant Secretary, ADM	10/1/96-11/8/96	To provide support	None.
Contracting Specialist (FS)	00	10/1/96-9/30/97	Purchase card automation project	None.
Accountant (FS)	Under Secretary, NRE	10/1/96-9/30/97	Financial Information System Vision and Strategy	\$72,000.
Accountant (FS)	Under Secretary, NRE	10/1/96-9/30/97	Financial Information System Vision and Strategy	\$69,000.
Management Analyst (FS)	Under Secretary, NRE	10/1/96-9/30/97	Financial Information System Vision and Strategy	\$86,000.
Computer Specialist (FS)	Under Secretary, NRE	10/1/96-9/30/97	Financial Information System Vision and Strategy	None.
Secretary (FS)	OSEC	11/1/96-11/12/97	To provide support	None.
Program Manager (FS)	DA	10/1/96-Present	FS Liaison Hazardous Waste Management Support	\$90,000.
Program Manager (FS)	DA	10/1/96-Present	FS Liaison Hazardous Waste Management Support	\$80,000.
Engineer (FS)	DA	10/1/96-Present	FS Liaison Hazardous Waste Management Support	\$80,000.
Program Manager (FS)	OC	10/1/96-12/7/96	To assist with public affairs	None.
Program Manager (FS)	Under Secretary, NRE	10/1/96-9/30/97	To provide support	\$12,600.
Accountant (FS)	Under Secretary, NRE	10/1/96-9/30/97	Financial Information System Vision and Strategy	\$56,000.
Computer Specialist (FS)	MAPP	10/1/96-9/30/97	Modernization of administrative processes	\$86,000.
Administrator (ARS)	Under Secretary, REE	10/21/96-Present	To serve as Acting Under Secretary	None.
Program Manager (ARS)	Under Secretary, REE	10/1/96-1/31/97	Mission Support/MS TC Liaison	None.
Accounting Technician (ARS)	OIRM	8/5/96-1/31/97	Administrative support	\$7,418.
Confidential Assistant (ARS)	Assistant Secretary, Adm.	10/1/96-3/1/97	To provide support	None.
Information Specialist (ARS)	Under Secretary, REE	1/1/96-4/1/97	Mission Support/MS TC Liaison	None.
Property Dispatch Technician (ARS)	FSIS	7/8/96-5/27/97	To learn computer entry trouble shooting	\$24,758.
Supervisory Computer Specialist (ARS)	MAPP	8/1/96-9/30/97	Computer management support	\$91,579.
Admin & Facilities Manager (ARS)	MAPP	11/3/96-11/2/97	Technical expertise	None.
Budget Analyst (ARS)	OIRM	6/23/96-6/22/97	Budgetary support	On OIRM payroll.
Secretary (ARS)	Civil Rights	11/3/96-3/31/97	Clerical support	None.
Account Technician (ARS)	OIRM	8/5/96-1/31/97	Administrative support	None.
Property Dispatch Technician (ARS)	FSIS	7/8/96-5/27/97	To learn computer entry trouble shooting	\$7,508.
Home Economist (ARS)	CSREES	5/20/96-10/31/96	Administrative & managerial support	None.
Secretary (ARS)	Purchasing Card Implement Team	4/1/96-3/31/97	Clerical support	\$20,107.
Secretary (CSREES)	OSEC	10/1/96-9/30/97	Secretarial assistance	\$38,352.
Secretary (CSREES)	Under Secretary, REE	Indefinite	Mission support, secretarial assistance	None.
Associate Administrator (CSREES)	Under Secretary, REE	Indefinite	Mission support	None.
Special Assistant (CSREES)	Under Secretary, REE	Indefinite	Communications Coordinator	None.
Social Sci. Analyst (ERS)	Office of Civil Rights	11/1/96-1/3/97	Civil Rights Task Force	None.
Social Sci. Analyst (ERS)	NAL	2/24/97-8/2/97	File Automation	None.
Agr. Economist (ERS)	FAS	9/30/96-2/1/97	Technical assist. Turkey	\$41,000.
Budget Coordinator (ERS)	Under Secretary, REE	Indefinite	Mission Support/Budget Coordination	None.

DETAILED FOR MORE THAN 30 DAYS—FISCAL YEAR 1997—Continued

Position/Agency	Detailed to	Date/length	Purpose	Reimbursed
Supervisory Agricultural Economist (GIPSA)	FAS	10/1/96-9/30/97	Agribusiness advisor	\$127,000.
Agr. Commodity Grader(AMS)	NRCS	37 Days	Assist with an 1890 scholars data base project	None.
Secretary (AMS)	Civil Rights Office	155 Days	Assist with civil rights case load	None.
Program Assistant (AMS)	Civil Rights Office	211 Days	Assist with civil rights case load	None.
Program Analyst(APHIS)	NFC	1/27/97-3/26/97	Conduct misconduct investigations	\$17,600.
Integrated System and Acquisition Project (ISAP) Manager (APHIS).	MAPP	11/95-9/97	On team to redesign procurement system	\$180,978.
Supervisory Computer Specialist (APHIS)	MAPP	3/96-3/97	On team to redesign T&A system	\$43,833.
Computer Specialist (APHIS)	MAPP	10/96-9/97	On team to redesign procurement system	\$42,432.
Veterinarian Medical Officer (APHIS)	OSEC	1/7/96-2/28/97	Assist on food safety project	\$42,432.
Supervisory Computer Specialist (APHIS)	MAPP	7/96-9/97	On team to redesign procurement system	None.
Personnel Management Specialist (APHIS)	MAPP	3/3/96-9/30/97	On team to redesign procurement system	\$98,103.
Management Analyst (APHIS)	OCFO	10/1/95-3/16/97	On team to develop financial systems	\$116,441.
Systems Accountant (APHIS)	OCFO	10/1/96-9/30/97	On team to develop financial systems	\$133,649.
Budget Analyst (APHIS)	OSEC	6/10/96-6/6/97	Assist Service Center Implementation Team	\$67,588.
Branch Chief (APHIS)	MAPP	10/96-7/97	On team to implement VISA card reform	None.
Special Assistant to the Administrator (APHIS).	Assistant Secretary, MRP	5/96-9/97	To provide support	None.
Confidential Assistant to the Administrator (APHIS).	Assistant Secretary, MRP	10/96-9/97	To provide support	None.
Confidential Assistant (FSIS)	AMS	5/94-1/97	Assist with communications	None.
Secretary (FSIS)	OSEC	11/95-Present	Clerical support	Agreement being developed.
Secretary (FSIS)	DA	1/96-Present	Clerical support	None.
Food Technologist (FSIS)	FAS	3/96-3/97	Food technology support	None.
Budget Analyst (FSIS)	ARS	9/96-1/97	Staff assistance	\$22,800.
Program Analyst (FSIS)	NRCS	12/96-2/97	Civil Rights Work Group	None.
Industrial Engineer (FSIS)	ARS	1/97-5/97	Staff assistance	None.
Deputy Inspector General	Dept. of Trans. (DOT)	10/1/96-Present	Acting Principal Deputy Inspector General	\$75,000.

DETAILED FOR MORE THAN 30 DAYS—FISCAL YEAR 1996

Position/Agency	Detailed to	Dates	Purpose	Reimbursed
Conf. Asst. to Adm. (RHS)	White House	5/20/94-3/30/96	Assist Voting Office	(1)
Conf. Asst. to Adm. (RHS)	White House	11/10/94-8/31/96	Assist Domestic Policy Office	(1)

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Conf. Asst. to Adm. (RHS)	White House	3/8/96-9/27/96	Assist Office of Presidential Personnel	(1)
Correspondence Control Assistant (FCS)	Under Secretary, FNCS	12/24/95-9/26/96	Secretarial support	None.
Conf. Asst. To Adm. (FCS)	Office of Communications	11/8/95-9/30/96	Write speeches for the Secretary	None.
Supervisory Program Analyst (FCS)	Office of Civil Rights	11/30/92-3/31/96	Civil rights enforcement	None.
Program Manager (FCS)	FAS—South Africa	11/15/95-2/15/96	Guidance on FCS programs	\$31,807.
Grants Management Specialist (FCS)	Dept. of Justice	2/25/96-9/30/96	Support Financial Crime Enforcement Network	None.
Property Management Specialist (FCS)	ORM	2/4/96-8/17/96	Telecomm. work	\$42,276.
Supervisor Program Manager (FCS)	Under Secretary, FNCS	3/31/96-7/29/96	Serve in the absence of the Executive Assistant to Under Secretary	None.
Accountant (FCS)	OIG	9/5/95-1/2/96	Assistance on use of automated accounting systems	None.
Assistant to the Administrator (FCS)	Under Secretary for FNCS	10/30/94-8/2/96	Program support	None.
Assistant Administrator (FCS)	Dept. of Treasury	11/15/93-1/20/96	Leader of the Electronic Benefits Task Force (EBTF)	None.
Policy Analyst (FCS)	Dept. of Treasury	1/24/94-9/30/96	Assistant Leader of the EBTF	None.
Financial Management Specialist (FCS)	Dept. of Treasury	11/15/93-9/30/96	Assistance on EBTF	None.
Special Assistant for Policy & Planning (FCS)	OCFO	10/17/95-9/30/96	Special financial project	\$104,510.
Senior Budget Analyst (FCS)	Under Secretary, FNCS	7/9/95-9/30/96	Budget and legislative support	None.
Assistant Project Manager (FCS)	Under Secretary, FNCS	2/13/96-7/31/96	Support for Team Nutrition	None.
Conf. Asst. to Adm. (FCS)	Under Secretary, FNCS	1/22/95-9/28/96	Administrative support	None.
Conf. Asst. to Adm. (FCS)	Under Secretary, FNCS	9/5/93-9/30/96	Administrative support	None.
Conf. Asst. to Adm. (FCS)	Under Secretary, FNCS	10/3/93-9/30/96	Legislative support	None.
Correspondence Assistant (FCS)	Under Secretary, FNCS	10/18/93-11/25/95	Secretarial support	None.
Conf. Asst. to Adm. (FCS)	Under Secretary, FNCS	3/2/95-10/14/95	Administrative support	None.
Accounting Officer (FCS)	OCFO	11/8/93-9/30/96	To work on a special project	\$83,346.
Staff Assistant (FCS)	Under Secretary, FNCS	2/20/94-9/30/96	Administrative support	None.
Budget Officer (FCS)	MAPP	5/6/96-9/30/96	Telecommunication activities	\$24,037.
Writer (FCS)	Under Secretary, FNCS	5/19/96-9/30/96	To write speeches, letters, etc	None.
Program Analyst (FCS)	Under Secretary, FNCS	8/19/96-9/30-96	Support for FCS programs	None.
Policy Analyst (FCS)	New Mexico Dept. of Human Services	2/15/94-8/30/96	IPA—Provide assistance to EBT	\$63,937.
Program Specialist (FCS)	Dept. of Health, Commonwealth of Puerto Rico.	10/23/95-9/30/96	IPA—Develop and help implement a vendor selection system for WIC.	\$54,858.
Accountant (FCS)	Dept. of Health, Commonwealth of Puerto Rico.	5/12/96-8/31/96	IPA—Assist in reorganizing WIC	\$21,431.
Supervisory Program Specialist (FCS)	Calif. Dept. of Education	10/26/95-9/30/96	IPA—Provide technical assistance on Summer Food Service Program	None.
Program Specialist (FCS)	New Mexico Dept. of Health	2/8/93-9/30/96	IPA—Assistance on WIC and CSFP	\$50,146.
Executive Assistant (FCS)	Texas Dept. of Health	6/6/94-9/30/96	IPA—Assistance on civil rights and EEO	\$37,980.
Program Analyst (FCS)	Office of Communications	6/12/94-9/30/96	To work on FCS Ameri-Corps Program	None.
Supervisory Program Analyst (FCS)	OMB	7/15/96-9/30/96	Career Development Exchange Program	None.
Executive Assistant (MRC)	Under Secretary, NRE	3/24/93-3/16/96	Assistance on NRE issues	None.
Secretary (FS)	Under Secretary, NRE	10/17/95-9/30/96	Support	None.
Program Specialist (FS)	Under Secretary, NRE	10/17/95-9/30/96	Support	None.
Writer (FS)	Office of Communications	5/1/96-9/30/96	Support	\$8,866.

DETAILED FOR MORE THAN 30 DAYS—FISCAL YEAR 1996—Continued

Position/Agency	Detailed to	Dates	Purpose	Reimbursed
Program Specialist (FS)	ORM	5/1/96-9/30/96	Support	None.
Secretary (FS)	Assistant Secretary, ADM	10/1/95-9/30/96	Support	None.
Accountant (FS)	Under Secretary, NRE	10/1/95-9/1/96	Financial Information System Vision and Strategy	\$75,086.
Accountant (FS)	Under Secretary, NRE	10/1/95-9/30/96	Financial Information System Vision and Strategy	\$65,263.
Accountant (FS)	Under Secretary, NRE	3/18/96-9/30/96	Financial Information System Vision and Strategy	\$36,007.
Management Analyst (FS)	Under Secretary, NRE	10/1/96-9/30/96	Financial Information System Vision and Strategy	\$84,886.
Management Analyst (FS)	MAPP	10/1/96-9/30/96	Modernization of administrative processes	None.
Program Specialist (FS)	DA	10/1/96-9/30/96	Hazardous waste management support	\$86,000.
Program Specialist (FS)	DA	10/1/96-9/30/96	Hazardous waste management support	\$76,000.
Engineer (FS)	DA	10/1/96-9/30/96	Hazardous waste management support	\$76,000.
Messenger (FS)	Under Secretary, NRE	intermittently	Support	None.
Writer (FS)	Office of Communications	10/17/95-9/30/96	Support	None.
Entomologist (FS)	Hispanic Association of Colleges and Universities.	10/1/95-9/30/96	Support	None.
Confidential Assistant (FSIS)	APHIS	6/94-4/96	Director of Legislative Affairs	None.
Program Analyst (FSIS)	OP	11/94-10/95	Analytical work on Year 2000	None.
Food Technologist (FSIS)	CSREES	6/95-10/95	Biotechnology expertise	None.
Staff Assistant (FSIS)	OSEC	11/95-3/96	Staff assistance	None.
Staff Assistant (FSIS)	OSEC	3/96-6/96	Staff assistance	None.
Program Assistant (FSIS)	OP	4/96-6/96	Clerical support	None.
Asst. to the Deputy Admin. (FSIS)	DA	4/96-10/96	Senior staff assistance	None.
Program Analyst (ARS)	Under Secretary, REE	8/15/96-9/30/96	Mission Support, NSTC Liaison	None.
Chemist (ARS)	Under Secretary, REE	5/20/96-9/15/96	Special Management Intern Program	None.
Supervisory Computer Specialist (ARS)	MAPP	8/96-9/30/96	Computer management support	None.
Supervisory Purchasing Agent (ARS)	MAPP	3/6/95-9/30/96	Administrative and clerical support	\$39,435.
Contract Specialist (ARS)	MAPP	10/15/95-9/30/96	Credit Card Project	\$52,188.
Budget Analyst (ARS)	ORM	6/23/96-9/30/96	Budgetary support	\$16,655.
Secretary (ARS)	Purchasing Card Implementation Team	4/1/96-9/30/96	Clerical support	\$18,574.
Confidential Assistant (ARS)	Assistant Secretary, ADM	7/28/96-9/30/96	Department support	None.
Confidential Assistant (ARS)	Under Secretary, REE	10/1/95-9/30/96	Mission support	None.
Secretary (CSREES)	OSEC	9/22/95-9/30/96	Secretarial support	None.
Computer Specialist (CSREES)	Washington Service Center	11/20/95-3/31/96	Computer assistance	None.
Computer Specialist (CSREES)	MAPP	10/31/95-2/28/96	Computer assistance	\$14,234.
Legislative Affairs Assistant (CSREES)	National Performance Review	5/5/96-9/15/96	Technical support	None.
Secretary (CSREES)	Under Secretary, REE	5/96-9/96	Mission support	None.
Ecologist (CSREES)	Under Secretary, REE	8/12/96-9/15/96	NSTC Liaison	None.

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DETAILS UNDER 30 DAYS—FISCAL YEAR 1996

Position/agency	Detailed to	Date/length	Purpose
Agr. Commodity Grader-Grain (GIPSA)	APHIS	5/28/96-6/27/96	To work on Karnal Bunt.
Agr. Commodity Grader-Grain (GIPSA)	APHIS	5/28/96-6/27/96	To work on Karnal Bunt.
Agr. Commodity Grader-Grain (GIPSA)	APHIS	5/28/96-6/27/96	To work on Karnal Bunt.
Agr. Commodity Grader-Grain (GIPSA)	APHIS	6/12/96-7/12/96	To work on Karnal Bunt.
Agr. Commodity Grader-Grain (GIPSA)	APHIS	6/03/96-7/03/96	To work on Karnal Bunt.
Agriculture Commodity Tech. Grain (GIPSA)	APHIS	5/28/96-6/26/96	To work on Karnal Bunt.
Agriculture Commodity Tech. Grain (GIPSA)	APHIS	5/28/96-6/26/96	To work on Karnal Bunt.
Agr. Commodity Grader-Grain (GIPSA)	APHIS	6/04/96-7/02/96	To work on Karnal Bunt.
Agr. Commodity Grader-Grain (GIPSA)	APHIS	6/20/96-7/12/96	To work on Karnal Bunt.
Indl. Specialist, Agriculture (GIPSA)	APHIS	5/28/96-6/18/96	To work on Karnal Bunt.
Agr. Commodity Grader-Grain (GIPSA)	APHIS	5/29/96-6/19/96	To work on Karnal Bunt.
Agr. Commodity Tech. Grain (GIPSA)	APHIS	5/28/96-6/17/96	To work on Karnal Bunt.

DISCRIMINATION COMPLAINTS/CIVIL RIGHTS ENFORCEMENT

Question. Mr. Secretary, you have worked to investigate and address complaints of discrimination and lack of service to minorities and small farmers in USDA farm loan programs. I know that your civil rights action team will soon be releasing its recommendations. Is the moratorium on loan foreclosures still in effect?

Answer. It is not really a moratorium, it is a review. All pending foreclosures will continue to be reviewed by state and federal officials to ensure that discrimination or unfair treatment was not a factor. If discrimination may have played a factor, the foreclosure is stopped. However, if there is no finding of discrimination, the foreclosure goes forward.

Question. Can you summarize the major findings of the team and what safeguards it recommends be instituted to make sure discrimination does not continue or occur again?

Some have suggested that this problem might be attributed to the county committee system. Did the action team find this to be the case? Is it recommending any changes in the county committee structure?

Answer. The Civil Rights Action Team made 92 recommendation in the areas of management, accountability, program delivery, workforce diversity and the organization structure of civil rights. The report also includes actions plans for implementing the recommendations. Most are feasible. Some may need further review. I have set a goal of implementing those recommendations that do not require legislative action within the next six months.

The most dramatic changes at USDA will come from our efforts to reign in authority to ensure accountability. USDA will seek legislative authority to convert all non-federal county positions in the Farm Services Agency to federal employee status.

Other immediate actions include: working to eliminate the backlog in both program and EEO complaints; vesting the Assistant Secretary for Administration with the authority to review the civil rights records of agency heads and Subcabinet officials; creating a civil rights arm of the Office of the General Counsel; establishing a national commission on small farms to develop an aggressive strategy for keeping this important American tradition alive and well; creating a department-wide workforce planning and recruitment effort; and requiring annual civil rights training for all employees.

A copy of the civil Rights Action Team Report is also provided for the use of the committee.

[CLERK'S NOTE.—The Civil Rights Action Team Report does not appear in the hearing record, but is available for review in the subcommittee's files.]

CIVIL RIGHTS

Question. At your request Mr. Secretary, additional funds were provided for fiscal year 1997 to reduce the backlog of equal employment opportunity and program discrimination complaint cases.

How did this backlog accumulate?

Answer. The backlog in employment cases resulted from a dramatic increase in the number of complaints being filed in the past five years, without a similar increase in the resources assigned. For example, the average number of counseling contacts annually for fiscal years 1987-1991 was 1360. For fiscal years 1992-1996, we experienced a 39 percent increase in counseling contacts to an annual average

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of 1884. More dramatically, the average number of formal complaints filed rose from an annual average of 271 for fiscal years 1987–1991 to an annual average of 630 for fiscal years 1992–96, a 132 percent increase. I will provide a table for the record showing the annual figures.

[The information follows:]

Fiscal year	Counseled	Formal filed	Formal closed
1987	1,469	332	363
1988	1,332	277	369
1989	1,078	247	327
1990	1,349	211	280
1991	1,572	288	261
1992	1,628	462	229
1993	2,005	683	459
1994	2,223	666	501
1995	1,732	772	383
1996	1,830	566	1,035

There are multiple reasons for the increase, and we do not pretend to be able to state with absolute certainty how much each factor contributed. However, we believe two changes in law and regulation were major factors. First, the Civil Rights Act of 1991 provided for compensatory damages in cases of intentional discrimination. This element of relief, whatever its merits otherwise, has raised the determination of employees to pursue their complaints further into the process. Second, the Equal Employment Opportunity Commission issued new regulations on October 1, 1993. These regulations established time frames for the informal process which made it more difficult to reach closure before a complaint became formal.

USDA management also must accept responsibility for allowing the situation progress to the point it has. During the period from March 1992 until November 1995, the organization responsible for adjudicating formal complaints underwent several official and unofficial reorganizations, including 12 destabilizing changes in management. It has become clear that increased resources will be needed on a permanent basis to made the necessary improvements in this area.

Question. Is progress being made with the additional funds provided?

Answer. The funds are being used to track, process and resolve the USDA employee complaints. In addition, there are plans to assemble two major staffs to review and to the extent possible resolve all of the 1450 outstanding employee complaints and 550 outstanding program complaints. It is my understanding that findings indicate that significant progress has been made toward investigating and holding hearings regarding the employment complaints. It is our expectation that this will lead to a significant reduction. However, the findings further indicate that most of the 550 program complaints have not been investigated. Further investigation will be necessary for most of the program complaints prior to the time these complaints can be resolved.

Question. What is being done to ensure that this problem does not recur in the future?

Answer. We are trying to attack the problem from three directions. First, it is critical that we improve our rate of resolving complaints during the informal stages. We will be exploring more use of mediation, and will soon be deciding on the optimum placement of the EEO counseling function. Second, we will be maintaining an increased staff of adjudicators to handle formal complaints, and trying to improve their productivity through training and process reengineering. Third, we will be initiating efforts to prevent complaints in the first place. Supervisors need to be better trained in performing their jobs, and we are taking steps to institutionalize such training. Supervisors also need to be held accountable, so problems can be corrected before they multiply. Finally, we need to provide and strengthen alternative methods of addressing disputes in the workplace; employees need an effective avenue to get their concerns addressed without filing a discrimination complaint when discrimination is not the real problem.

MARKET ACCESS PROGRAM

Changes have been made in the Market Access Program (MAP) to make it more targeted and to increase small business participation in the program. For fiscal year 1998, the budget includes the full authorized permanent funding level of \$90 million for MAP.

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Question. How important is the Market Access Program to the promotion and expansion of U.S. agricultural exports?

Answer. The Market Access Program has been an important contributor to the gain in U.S. world market share of sales of consumer-oriented products since 1985. During this period, MAP and its predecessor, the Targeted Export Assistance Program, have helped this share grow from 11 percent to 18 percent in 1994. Each percent gain represents sales of more than \$1 billion. While changes in the value of the dollar have added to the growth, analysis carried out by FAS has indicated that market promotion contributed to more than half of the total increase.

Mr. Secretary, your prepared testimony indicates that "additional program improvements have recently been made which are designed to broaden participation, clarify program participation criteria, strengthen evaluation and accountability, and simplify program requirements for participation."

Question. How have these program changes been executed and could you briefly summarize the changes made and the reasons for those changes?

Answer. Consistent with the Administration's commitment to streamlining government activity, new MAP regulations were published on February 1, 1995, that increased flexibility and simplified program requirements for participants. The revised regulations also reflected public comments and changes made by the Omnibus Budget Reconciliation Act of 1993. Among the changes made by the rule are:

(a) U.S. exporters no longer need to show that a U.S. agricultural commodity faces an unfair trade practice in an overseas market in order to participate in the program;

(b) small businesses and cooperatives are accorded priority consideration in the allocation of brand promotion funding;

(c) application and allocation approval criteria are clarified;

(d) procedures for appealing compliance findings are added; and

(e) paperwork requirements have been reduced by simplifying contracting standards and procedures and streamlining the format for various program documents.

With regards to evaluation, FAS allocates funds in a manner that effectively supports decision-making initiatives of the Government Performance and Results Act (GPRA) of 1993. FAS considers a number of factors when reviewing MAP proposals, several of which relate to export performance, both past performance and projected export goals. In fact, in the MAP competitive allocation process, 60 percent of the total weight relates to export performance.

In addition, each participant is required to conduct an annual program evaluation to determine the effectiveness of the participant's strategy in meeting overall goals. Participants must identify goals to be met within a specified time, a schedule of measurable milestones for gauging success, plans for achievement, and results of activities at regular intervals. The evaluation results are analyzed by FAS and help guide the development and scope of a participant's program.

With these changes in place, program management and accountability have been strengthened. For example, over the last 6 years compliance findings against program participants have decreased and repayments by program participants for unauthorized or inappropriate expenditures have been less than 1 percent of the total MAP funding level, a clear indication that these steps are working.

EXPORT ENHANCEMENT PROGRAM

The President's fiscal year 1998 budget proposes to make \$500 million available for the Export Enhancement Program, the maximum level permitted by provisions of the 1996 Farm Bill. Quite frankly, EEP was limited in the appropriations act for fiscal year 1997 and in previous years because there was a general consensus that the maximum permitted level would not be required.

Question. Do you expect to utilize the \$100 million currently available for the Export Enhancement Program, and why do you believe that the \$500 million maximum program level will be required in the fiscal year 1998?

Answer. EEP allocations for the July 1996-June 1997 period, announced last summer, were at the maximum quantity levels allowed under the Uruguay Round Agreement reduction commitments. However, at present, we do not believe that current world market conditions warrant the use of subsidies by anyone. In general, U.S. supplies are relatively tight, and we are exporting what we have available without the need to use subsidies. Unfortunately, the responsible restraint by the United States has been tested by renewed subsidization by the European Union, which began in September 1996. We believe it is extremely important that we maintain a strong position in order to protect our agricultural trade interests. Resumption of EEP is an option we may need to consider and we have, therefore, provided funding for EEP in 1998 at the maximum level permitted by the 1996 Farm Bill.

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PROPOSED PUBLIC LAW 480 TITLE I RESCISSION

The Administration proposes a \$50 million total reduction in fiscal year 1997 appropriations for Public Law 480 Title I (a \$3.5 million rescission of Title I ocean freight differential funds and a rescission of \$46.5 million in subsidy budget authority in the direct credit program). The budget indicates that commodity shipments would be reduced by 200,000 metric tons as a result of this proposed rescission. However, it also indicates that allocations of Title I commodity assistance that have already been announced for fiscal year 1997 would not be affected by the proposed rescission because the reduction in program funding will be taken from a reserve of unallocated funds and from unobligated funds carried over from fiscal year 1996.

Question. With respect to the proposed rescission of Public Law 480 Title I funding, what is the total reserve of unallocated funds and unobligated funds carried over from fiscal year 1996?

Answer. The total reserve of unallocated fiscal year 1997 funds is \$24.6 million, and the unobligated funds carried over from fiscal year 1996 total \$32.9 million. The total from both sources is \$57.5 million.

Question. How much of the proposed rescission would come from the reserve and how much would come from fiscal year 1996 carryover balances?

Answer. The fiscal year 1996 carryover funds have been made available for programming in fiscal year 1997 through the apportionment process and, thus, funding from both sources is now commingled. The rescission proposes to reduce budget authority for the Title I credit account by \$46.5 million and for the ocean freight differential account by \$3.5 million. Upon enactment of the rescission, just over \$7 million would remain in the ocean freight differential account for fiscal year 1997. We believe this remaining reserve is needed to meet current programming plans because the rate of ocean freight differential payments has been increasing recently. If our original estimate of the costs of meeting cargo preference requirements for Title I proves to have been too low, we will need the reserve to meet the higher costs.

Question. Does the proposed rescission have the impact of reducing commodity shipments by 200,000 metric tons because, in its absence, the unobligated and reserve funds would be spent?

Answer. Our tonnage estimates for Public Law 480 programming are always based on the assumption that program funds will be fully obligated. Consequently, when we reduce Title I budget authority by \$50 million, we need to make a corresponding reduction in our tonnage estimate.

Question. The law permits available funds to be transferred between titles of the Public Law 480 program. Has the Administration concluded that if unobligated and carryover funds are not required for Title I of the program, they also will not be required to supplement funds for Titles II and III of the program this year?

Answer. The decision to propose the Title I rescission was based on the need to identify an offset for the supplemental that has been requested that includes the Special Supplemental Nutrition Program for Women, Infants, and Children. However, at this time we have no reason to believe that funding will be inadequate for the Titles II and III programs this year. It is also important to note that, even with the rescission in Title I, we estimate total Public Law 480 commodity programming of 3.2 million metric tons for the year, which is still above the 3.0 million metric tons we programmed last year.

PUBLIC LAW 480—FISCAL YEAR 1998 REQUEST

The fiscal year 1998 request proposes to maintain funding for Titles II and III of the Public Law 480 program, but to reduce funding available for Title I credit sales. Direct credit authority is reduced from the fiscal year 1997 level of \$227 million to \$113 million (a reduction of \$114 million); the subsidy appropriation is reduced from \$186 million to \$88 million (a reduction of \$98 million); and ocean freight differential costs are reduced from \$14 million to \$10 million (a reduction of \$4 million). The budget also proposes to transfer budget and expenditures for the Title I concessional sales program from the international affairs function to the agricultural function. The rationale given for this shift is to allow the Title I program to be managed and budgeted as part of a consistent package of agricultural export programs.

Question. Why does the fiscal year 1998 request propose to reduce funding for the Public Law 480 Title I program?

Answer. The reduction proposed for Title I programming in fiscal year 1998 reflects constraints on discretionary spending and the difficult choices that had to be made in order to meet the President's commitment of balancing the Federal budget by fiscal year 2002. It is important to note that 1998 funding for Titles II and III

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of Public Law 480 will remain largely unchanged from 1997 enacted levels, which ensures that adequate resources will be available to meet the most serious food assistance needs, including emergencies.

Question. Is this proposed reduction in any way related to the proposed transfer of the program from the international affairs function to the agricultural function of the budget?

Answer. The reduction does not result from the transfer of Title I from the international affairs function to the agriculture function. In fact, one of the primary reasons for making the transfer is to improve the Department's ability to support future budgetary resources for the program. Because the market development objectives of Title I are more closely aligned with the purposes of the agriculture function, it will be easier to allocate funding for Title I there rather than in the international affairs function where the primary objectives are foreign policy and national security.

Question. I thought changes in budget presentation were made by OMB after consultation with the Budget Committees of the Congress. Why is this change proposed formally in the President's budget?

Answer. It is our understanding that OMB did consult with senior staff of the Budget Committees and the Agriculture Appropriations Subcommittees. Following those consultations, the President's budget was modified to move the Title I credit account to the agriculture function. Because of time constraints, ocean freight differential funding for Title I could not be transferred and remains in the international affairs function. However, we plan to modify the budget presentation for the 1999 budget so the ocean freight differential funding will also be included in the agriculture account.

Question. Are you asking that we legislate the change?

Answer. The President's budget has already transferred the Title I credit account to the agriculture function, so we will not be submitting proposed legislation on this matter.

Question. The prepared testimony indicates that the fiscal year 1998 budget request for the Public Law 480 program would provide for approximately the same level of metric tons of commodity assistance as currently estimated for fiscal year 1997. However, the budget justification indicates that the program level for Title I would decrease from 0.919 million metric tons grain equivalent (MMTGE) to 0.634 MMTGE in fiscal year 1998; the Title II program level would remain the same at 2.4 MMTGE; and the Title III program would be increased from 0.117 MMTGE to 0.150 MMTGE in fiscal year 1998. The fiscal year 1998 request in fact proposes a net reduction from fiscal year 1997 in Public Law 480 metric tons of commodity assistance and, specifically, a reduction of 0.285 metric tons in Title I commodity assistance from fiscal year 1997. Is this correct?

Answer. The table in the budget justification materials which provides estimates of Public Law 480 tonnages does not reflect the effect of the proposed rescission in Title I budget authority for fiscal year 1997. The rescission would reduce the tonnage estimate for fiscal year 1997 Title I programming by approximately 200,000 metric tons. If the effect of the rescission is taken into account, total Public Law 480 tonnage is estimated to be 3.2 million metric tons in both FYs 1997 and 1998.

SUPPLEMENTAL NUTRITION PROGRAM FOR WOMEN, INFANTS, AND CHILDREN (WIC)

Mr. Secretary, the Administration is seeking \$100 million in fiscal year 1997 supplemental funding for the supplemental nutrition program for women, infants, and children (WIC).

Question. I understand that food package costs and participation have increased above projected levels. However, perhaps you could tell us the impacts of not acting on this request. Would available funding still be adequate to maintain the existing WIC caseload? In other words, are we talking about throwing WIC participants off the rolls without this additional funding, or are we talking about slowing the growth of or not further expanding program participation?

Answer. Our rationale for requesting the supplemental really is simple. We are committed to full funding WIC, serving about 7.5 million eligibles by the end of fiscal year 1998. This goal would be compromised by participation fall off forced by lack of funds.

Food and Consumer Service historical data shows that States usually underspend their grants, due to correctly cautious management and to the uncertainties of rebate cash flows, fluctuating demand for service and unanticipated food cost changes. This has resulted in carry over funds from one year to the next. While States will work harder than ever to fully use their grants this year, and should reduce carry over, program history suggests that carry over will be about 2.5 percent. If there

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is no supplemental, States may not be able to sustain their current caseload levels in fiscal year 1997.

MANAGING WIC WITHIN AVAILABLE FUNDS

Question. What did the Department do at the outset of the fiscal year to manage the WIC program within its available funding level so as to prevent a large drop in participation at the end of the year?

Answer. The States handle the WIC program at the recipient service level. USDA, through the Food and Consumer Service's seven Regional Offices, provides oversight, policy guidance, and technical assistance to WIC State Agencies. FCS does not allocate caseload to the States, only funding. And we believe that this is as it should be.

When we advise States of their grant levels at the start of the year, we provide them with a projection of the caseload we think they can handle, given their prior year's food costs, expected rebate revenue, and food inflation projections. We take a snapshot several times during the year to see if any State has funds it will not need, so that they can be recovered and reallocated to a State needs them. We provided States extra warnings this year, that funding was likely to be tight—and we are continuing with this process. Ultimately, however, the States decide which and how many individuals they can serve within their grants.

OFFSETS FOR WIC 1997 SUPPLEMENTAL REQUEST

Question. As you are aware, if this supplemental funding is provided, this subcommittee most likely would have to offset its cost, both in budget authority and outlays, by reducing existing appropriations for other USDA activities. The Administration has proposed a \$50 million rescission of Public Law 480 Title I funding, but this would offset only half the budget authority and only about one-third of the outlay impact of the requested WIC supplemental. Is this WIC supplemental funding request a priority if further reductions need to be made in existing funding for other USDA activities? If so, what other offsetting reductions would you suggest?

Answer. The WIC supplemental is a priority of the Administration's and has been accounted for in the President's plan to balance the budget by the year 2002. This plan includes other high priority USDA programs in addition to WIC. If the Administration's plan is adopted by Congress, no further cuts to USDA will be required to offset the WIC supplemental.

WIC OFFSETS FOR 1998

For fiscal year 1998, the administration proposes a \$378 million increase in WIC funding above the fiscal year 1997 level. I don't think there is a member of the Congress who would not like to fully fund the WIC program. However, I do not expect that this Subcommittee will receive a discretionary spending allocating higher than the fiscal year 1997 level, requiring at least an offsetting reduction for any increase provided.

Question. Is the proposed fiscal year 1998 WIC funding increase a priority for the Department to the extent that you would suggest offsetting reductions in funding for other USDA programs? What funding reductions would you suggest?

Answer. WIC full funding is a priority of the Administration's. Funding sufficient so that all eligibles may participate by the end of fiscal year 1998, has been taken into consideration in preparing the President's plan to balance the budget by the year 2002. If the President's plan is followed, no further offsetting reductions to Agriculture will be required.

OFFICE OF THE SECRETARY

Question. The explanatory notes indicate that \$207,000 in fiscal year 1997 and \$273,000 in fiscal year 1998 of the funds available for the Office of the Secretary will be obligated under another USDA appropriations for an Assistant to the Secretary for Western Affairs. Under which USDA appropriation will these funds be obligated? Is this a new position? Why was it created?

Answer. These funds will be obligated equally between the Forest Service and Rural Business-Cooperative Services. This is a new position established to represent the Secretary in natural resource and rural economic development issues that cut across USDA and other Federal agency lines. The position of Assistant to the Secretary for Western Affairs was created to coordinate with other Federal agencies, local, State and tribal governments issues of concern in the Western region.

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SERVICE CENTER IMPLEMENTATION

Question. The explanatory notes indicate of the \$7,500,000 appropriated in fiscal year 1998 for Infoshare and now designated for Service Center Implementation, \$3,098,302 was obligated in fiscal year 1996 and \$4,401,698 will be obligated in fiscal year 1997. Please provide a detailed breakdown, by fiscal year, on the purposes for which these funds were obligated.

Answer. I will be glad to provide this information for the record.
[The information follows:]

[Dollars in Thousands]

Project	Fiscal year 1996 actual	Fiscal year 1997 estimate	Project totals
Infoshare Program	\$495	.....	\$495
Kentucky Pilot	438	.....	438
Telecommunications	500	.....	500
Business Process Reengineering/Business Process Improvement/Data Management	831	\$637	1,468
Change Management	657	2,760	3,417
Service Center Implementation Project Management	62	319	381
1996/1997 Departmental Administration/Office of the Chief Information Officer Oversight	115	285	400
Reserve for determination of future oversight needs .....	.....	401	401
Total, Appropriation	3,098	4,402	7,500

ADVISORY COMMITTEES

Question. For fiscal year 1997, the appropriations act establishes a \$1 million limitation on activities of advisory committees, panels, commissions, and task forces, excluding panels to comply with negotiated rulemaking or to evaluate competitively-awarded grants. Please provide a listing of the advisory committees, panels, commissions and task forces funded in fiscal year 1997, by agency, and the amount of funds allocated for each.

Answer. I will provide for the record a listing of those advisory committees, panels, commissions and task forces that are subject to the \$1 million limitation.

[The information follows:]

USDA Advisory Committees

<i>Policy Area and Committee Title</i>	<i>1997 Estimate</i>
Food, Nutrition and Consumer Services:	
National Advisory Council on Maternal, Infant and Fetal Nutrition .....	.....
National Advisory Council on Commodity Distribution .....	.....
Total .....	.....
Food Safety:	
National Advisory Committee on Meat and Poultry Inspection	\$32,158
National Advisory Committee on Microbiological Criteria for Foods ..	38,517
Total	70,675
Research, Education and Economics:	
National Ag. Research, Extension, Education & Econ. Advisory Board	329,149
National Genetics Resources Advisory Council	19,000
Dietary Guidelines Advisory Committee	5,376
National Nutrition Monitoring Advisory Council	36,000
Forestry Research Advisory Council	24,748

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<i>Policy Area and Committee Title</i>	<i>1997 Estimate</i>
Census Advisory Committee on Agriculture Statistics	56,000
Total	470,273
Marketing and Regulatory Programs:	
Federal Grain Inspection Advisory Committee	30,000
Advisory Committee on Foreign Animal and Poultry Diseases	20,350
General Conference Committee of the Nat'l Poultry Improvement Plan	7,969
National Animal Damage Control Advisory Committee	25,000
National Organic Standards Board	43,000
Total	126,319
Farm and Foreign Agricultural Services:	
Agricultural Policy Advisory Committee for Trade	14,119
Ag. Tech. Adv. Comm. for Trade in: Animals & Animal Products	14,110
Fruits and Vegetables	14,110
Grain, Feed & Oilseeds	14,110
Sweeteners	14,110
Tobacco, Cotton & Peanuts	14,110
Edward R. Madigan Ag. Export Excellence Award Board	28,090
Beginning Farmers and Ranchers	
Total	126,869
Natural Resources & Environment:	
Task Force on Agricultural Air Quality	50,000
Total	50,000
Subtotal, Advisory Committees	844,136
Contingencies	155,864
Total, Advisory Committees Limitation	1,000,000

Question. Why is the Department proposing to eliminate this limitation in fiscal year 1998?

Answer. We have proposed this change in order to provide the agencies with the flexibility needed, within available resources, to carry out the appropriate level of committee activities in support of USDA programs.

ADVISORY COMMITTEES

Question. Please provide a list of the advisory committees, panels, commissions, and task forces, by agency, included in the fiscal year 1998 budget request, and the amount of funds proposed for each one.

[The information follows:]

<i>Agency/group</i>	<i>1998 estimate</i>
ARS—National Genetic Resources Advisory Council	\$23,000
ARS—National Nutrition Monitoring Advisory Council	37,000
ARS—Dietary Guidelines Advisory Committee	159,140
CSREES—National Agricultural Research, Education, Extension, and Economics Advisory Board	329,149
CSREES—Forestry Research Advisory Council	25,396
APHIS—Foreign Animal and Poultry Diseases Advisory Committee	20,913
APHIS—General Counsel of the National Poultry Improvement Plan	9,928
APHIS—National Animal Damage Control Advisory Committee	25,000
AMS—National Organic Standards Board	44,000
GIPSA—Federal Grain Inspection Service Advisory Committee	30,000
NASS—Census Committee on Agriculture Statistics	58,000
FAS—Agricultural Policy Advisory Committee for Trade	14,119
FAS—Ag Tech. Advisory Committee for Trade in Animal & Animal Prod- ucts	14,110
FAS—Ag Tech. Advisory Committee for Trade in Fruits and Vegetables	14,110
FAS—Ag Tech. Advisory Committee for Trade in Grain Feed and Oilseeds	14,110
FAS—Ag Tech. Advisory Committee for Trade in Sweeteners	14,110

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<i>Agency/group</i>	<i>1998 estimate</i>
FAS—Ag Tech. Advisory Committee for Trade in Tobacco, Cotton and Peanuts	14,110
FAS—Edward R. Madigan Ag. Export Excellence Award Board	14,110
FSIS—National Advisory Committee on Microbiological Criteria for Foods	75,000
FSIS—National Advisory Committee on Meat and Poultry Inspection	75,000
NRCS—Task Force on Agricultural Air Quality	80,000
FSA—Advisory Committee on Beginning Farmers and Ranchers	35,393

HAZARDOUS WASTE MANAGEMENT

Question. The fiscal year 1998 request proposes an increase of \$9.3 million for hazardous waste management to meet mandated compliance deadlines for high risk sites. How many sites on USDA properties require hazardous waste cleanup, and what is your estimate of the amount of funds needed to complete all work identified?

Answer. The USDA currently estimates that over 4,500 sites under our jurisdiction, custody, or control will require a response action. The current estimate to complete this work is approximately, \$3.6 billion. This includes 1,728 abandoned or inactive mines at a cost of \$1.9 billion and up to 1,000 sites leased by the Commodity Credit Corporation at an estimated cost of \$1.5 billion. The Department has begun an initiative to increase the number of site cleanups by potentially responsible parties in order to accelerate the pace and share the financial responsibility for cleanup.

NATIONAL FINANCE CENTER

Question. The fiscal year 1997 appropriations act requires the Chief Financial Officer to actively market cross-servicing activities of the National Finance Center—NFC. Is this being done?

Answer. NFC is pursuing many avenues to actively market its full range of services to non-USDA agencies including actively participating in national conferences and symposiums to market NFC services Nationwide. In addition, publicizing NFC successes through established media and NFC publications is important to maintain the NFC's image as a leader in providing financial services.

In 1996, NFC began servicing the Federal Mediation and Conciliation Service and the Office of Congressional Compliance. We are scheduled to bring another four agencies into the National Finance Center over the next two years: the U.S. Capitol Police, the U.S. Architectural and Transportation Barriers Compliance Board, the Federal Housing Finance Board, and the Federal Elections Commission. NFC is also currently pursuing several other potential clients for our payroll systems as well as other administrative payment systems.

In addition, NFC is pursuing a number of marketing strategies to make our services more visible and appealing to potential users. For example, NFC held an NFC Payroll/Personnel EXPO here in Washington last October and participated in an information processing interagency conference in Austin, Texas, in December. NFC is scheduled to participate in at least four more conferences this fiscal year, allowing it to market the full range of NFC services to conference participants. NFC will also be initiating use of the Internet for marketing of services.

OFFICE OF THE INSPECTOR GENERAL: ASSET SHARING

Question. What amount has been deposited in the Department of Justice and/or Treasury Department Assets Forfeiture Fund in each of fiscal years 1996 and 1997 as a result of investigations in which the USDA Office of Inspector General (OIG) participates?

Answer. Cumulatively, over \$10 million has been identified for possible forfeiture to the Government as a result of our investigative actions since OIG was provided authority to receive proceeds from forfeitures in November 1995. In fiscal year 1996, property and/or funds valued at approximately \$7 million have been provided to the U.S. Department of Treasury's Assets Forfeiture Fund, and property and/or funds valued at approximately \$712,000 have been provided to the U.S. Department of Justice's Assets Forfeiture Fund as a result of investigations involving this agency. To date in fiscal year 1997, property and/or funds valued at approximately \$160,000 have been provided to the Treasury Asset Forfeiture Fund, and property and/or funds valued at approximately \$2.4 million have been provided to the Justice Assets Forfeiture Fund.

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Question. Is a memorandum of understanding between the OIG and the U.S. Department of Justice and/or U.S. Department of Treasury in place to allow USDA to receive an equitable share of these funds? If not, why?

Answer. Previously, a memorandum of understanding between OIG and the Department of Treasury was agreed to and signed by both agencies; however, Treasury has since withdrawn its agreement. No memorandum of understanding has been completed between OIG and the Department of Justice. Currently, OIG is involved in discussions with Justice, Treasury, and the Office of Management and Budget on OIG's receipt of forfeiture proceeds through equitable sharing. These discussions continue. Justice objects to equitable sharing with any Federal agency, including OIG.

QUESTIONS SUBMITTED BY SENATOR BOND

WIC SUGAR LIMIT

The USDA raised the possibility that it might alter the sugar cap for breakfast cereals approved for the WIC program many months ago and in response it received an avalanche of negative comments from parents, teachers, health professionals, public service and child care groups. The essential facts noted by the commentators is that the WIC diet is supplementary diet designed to be nutrient dense. For this reason it specifically limited the amount of sugar, fats and sodium. There seems to be no rational reason for adding empty sugar calories to a prescriptive diet designed for undernourished children.

Question. Can we expect that the retention of the sugar cap will be proclaimed by the Department in the near future?

Answer. As you noted, WIC foods are intended to provide nutrients lacking in the WIC population. And WIC foods are also a nutrition education tool used to help recipients learn how to select nutritional foods. We periodically consider recent research findings and advice from leading professional health and nutrition authorities to determine whether revisions in Federal program guidelines or regulations are needed.

The March 1996 WIC Cereal Sugar Limit Notice stated that USDA was aware that the newer clinical evidence indicated that sugar consumption is not believed to be an independent risk factor in the development of the chronic diseases of coronary heart disease, noninsulin diabetes, obesity and hyperactivity. We used the public forum of a Federal Register Notice to solicit feedback from the broad sectors of the community on whether continuation of a Federal restriction on the amount of sugar allowed in adult WIC cereal is still warranted. Among the many comments we received were suggestions that neither sugar nor any other attribute of WIC foods should be viewed in isolation, but rather they should be reviewed in the context of all of the WIC foods and their use in achieving WIC goals.

In follow-up, the Department will publish a notice in the Federal Register to summarize the public comments USDA received on the March 1996 Notice and to announce the Department's decision to examine WIC foods for consistency with the 1995 Dietary Guidelines for Americans and supporting scientific knowledge. USDA's Food and Consumer Service, in conjunction with the Center for Nutrition Policy and Promotion, will be conducting a scientific review of the WIC foods. Until this review is completed, the Department will not be making any changes in the current Federal sugar cap for WIC cereals.

AMERICAN DENTAL ASSOCIATION ON WIC SUGAR LIMIT

The American Dental Association is, as you know unconditionally opposed to an upward alteration in the sugar cap. The principal argument for such a revision seems to be that while additional sugar would do no good, it would also do no harm. This would be a strikingly weak argument even if it were true but it clearly is not. Added sugar would mean increased tooth decay among a group of children who already have a higher incidence of caries than the general juvenile population does.

Question. Has the position of the American Dental Association in this matter been given the full consideration it obviously deserves?

Answer. Yes. We have reviewed the materials provided by the American Dental Association in looking at the WIC sugar limits. Also, we welcome the American Dental Association's interest in WIC and in WIC foods, and encourage them to help us with our planned review of all WIC foods, including the sugar limits. Further, we hope the American Dental Association will help with our other programs in any way that they can.

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NATIONAL CORN GENOME INITIATIVE

On December 18, Senator Mosley-Braun and I sent a letter to you regarding the status of USDA's efforts to provide funding for the National Corn Genome Initiative (NCGI) which is the critical research priority by corn growers and processors. As we said in the letter, we believe that this project is of vital interest to our efforts to retain our leadership position in agricultural research and to ensure that our producers have the tools necessary for environmentally-responsible and sustainable agricultural production.

We had hoped that the research components of the Fund for Rural America might be recognized as a part of the Fund for Rural America. It was specifically mentioned in Farm Bill report language and is precisely the kind of basic science that will be the basis for us being competitive into the next century or falling behind. While I understand that many rural development projects yield immediate and visible benefits and are important, we should also have the vision to provide the tools that will be the key to success in the future.

The letter also notes that the fiscal year 1997 funding bill for the USDA included language urging that the Department provide increased attention and develop a long-term approach for corn genome mapping.

Question. We have not received a response to the December 18 letter. While I understand the Department has been active during the period since, I have several questions regarding the Corn Genome Mapping project. Does the Department consider the NCGI eligible for Fund for Rural America grants?

Answer. A broad-reaching proposal to map the corn genome could be submitted to the Fund for Rural America—FRA. Given that the FRA is designed to support multifunctional and multidisciplinary projects that combine research, education, and extension to some degree, the proposal should be one that also looks at the impact of the mapping project on the community, on breeders, and/or on producers. It might be beneficial to include technology transfer to indicate how the generated information will be disseminated and used.

Question. If so, will the Department give such an endeavor priority under the criterion that has been issued?

Answer. The FRA is a peer-reviewed competitive grants program. Many high quality proposals are expected to be submitted. All proposals will be reviewed competitively for quality, merit, and relevance. A proposal on corn genome mapping will compete under the same procedures through the peer review process.

Question. Are there funding limits (ceilings) on research projects funded by the Fund for Rural America? If so, what are they?

Answer. The Fund for Rural America includes several funding limits. The limit on planning grants for up to six months is \$25,000. Standard grants can be funded at up to \$600,000 for the life of a project; projects can extend for up to four years but cannot exceed the \$600,000 cap on total funding regardless of length of time. Center projects can be funded at up to \$1.0 million per year for up to four years. This puts the cap on total funding for a four-year center grant at up to \$4.0 million.

Question. What efforts are currently underway at the Department to fund genome mapping projects?

Answer. The major effort currently underway in the Department to fund genome mapping projects is the Plant Genome Program supported through the Cooperative State Research, Education, and Extension Services's—CSREES—National Research Initiative Competitive Grants Program—NRICGP—along with database development supported by the Agricultural Research Service—ARS. Other sources of funding include Special Research Grants, Hatch Act formula funds, and the NRICGP Animal Genetics Program under CSREES.

Question. Does the fiscal year 1998 request include funding for NCGI?

Answer. The fiscal year 1998 request does not include specific funding for NCGI. However, a portion of the increases requested for the CSREES NRICGP will be directed towards the priority area of plant genetic enhancement.

Question. If not, is the Department taking steps towards developing a long-term approach for funding this project?

Answer. ARS and CSREES are in the process of establishing an interagency corn genome mapping team to lay the groundwork for fiscal year 1999 and to develop strategies for corn genome mapping work.

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QUESTION SUBMITTED BY SENATOR MCCONNELL

WIC SUGAR LIMIT

It strikes me, Mr. Secretary, that an upward revision of the sugar cap on WIC cereals might set a precedent that could effect a wide variety of government actions and programs. The purpose of the WIC program has from the beginning been clearly and narrowly defined. It is to provide a defined service—a nutrient dense diet—to a defined group—women, infants and children who without a special supplementary diet would be poorly nourished and would inevitably suffer the serious physical and mental consequences of under nourishment.

This is a program which meets its goal in a most impressive way and it is clearly not a program that should be tinkered with.

Question. Would you agree with this observation? And if you would, would you also agree a lowering of WIC's very high standards for foods in the program would establish an unfortunate precedent that could be applied to dilute the original purpose of other precisely targeted programs?

Answer. Yes. I would agree with your observation. WIC foods are intended to provide nutrients lacking in the WIC population. Also, WIC foods are a nutrition education tool, used to help recipients learn how to select nutritional foods. We periodically consider recent research findings and advice from leading professional health and nutrition authorities to determine whether revisions in Federal program guidelines or regulations are needed.

The March 1996 WIC Cereal Sugar Limit Notice stated that USDA was aware that the newer clinical evidence indicated that sugar consumption is not believed to be an independent risk factor in the development of the chronic diseases of coronary heart disease, noninsulin diabetes, obesity and hyperactivity. We used the public forum of a Federal Register Notice to solicit feedback from the broad sectors of the community on whether continuation of a Federal restriction on the amount of sugar allowed in adult WIC cereal is still warranted. Among the many comments we received were suggestions that neither sugar nor any other attribute of WIC foods should be viewed in isolation, but rather they should be reviewed in the context of all of the WIC foods and their use in achieving WIC goals.

In follow-up, the Department will publish a notice in the Federal Register to summarize the public comments USDA received on the March 1996 Notice and to announce the Department's decision to examine WIC foods for consistency with the 1995 Dietary Guidelines for Americans and supporting scientific knowledge. USDA's Food and Consumer Service, in conjunction with the Center for Nutrition Policy and Promotion, will be conducting a scientific review of the WIC foods. Until this review is completed, the Department will not be making any changes in the current Federal sugar cap for WIC cereals.

QUESTIONS SUBMITTED BY SENATOR BURNS

BISON MANAGEMENT

Question. Mr. Secretary, I have always had great respect for the Animal Plant Health Inspection Service and the work that they have done to provide a healthy standards for American agriculture. I have never had a problem working with the restrictions that they have imposed in order to re-enter this country after visiting foreign countries. Today though this faith is waning. Can you explain to me the value of the guarantees that APHIS has provided the State of Montana?

Answer. One of APHIS' top priorities is to ensure the integrity of the Cooperative State-Federal Brucellosis Eradication Program and to protect the brucellosis-free status of the States surrounding Yellowstone National Park. These goals are critical to our efforts to encourage and support the domestic and international trade of beef cattle.

APHIS, along with the National Park Service (NPS), proposed a plan to stop bison from migrating outside of Yellowstone. This proposal suggests expanding the bison range into the adjacent Gallatin National Forest. The NPS will deploy 24-hour patrols to keep bison migrating from Yellowstone to a minimum and contain those animals that stray to a section of the Gallatin National Forest.

Question. I ask this Mr. Secretary, because in the past States have either placed or threatened to place restrictions on the shipment of Montana beef cattle into their States. Yet APHIS continued to guarantee the brucellosis free status of Montana. Can you explain the value of your determination to continue the brucellosis free status for Montana?

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Answer. Maintaining Montana brucellosis free enables Montana ranchers, as well as other border States, to continue shipping cattle into other markets. The threat of the spread of brucellosis can cause havoc to the state's livestock economy.

Question. In more than a dozen years of discussion among all the parties involved, and more recently the discussions between your office and Secretary Babbitt. Would you provide me with a breakdown on the movement that has occurred, if any?

Answer. APHIS, in cooperation with the Department of Interior's (DOI) NPS and the State of Montana, has recently agreed to an interim management plan in Yellowstone. The plan includes provisions for the capture, testing, slaughter, and removal of diseased bison that migrate outside certain areas in or adjacent to the Park. Federal and State agencies are also using additional coordinated nonlethal means to manage the bison and maintain the viability of the Yellowstone herd. Additionally, APHIS is working with DOI and State officials to develop long-term solutions that would eliminate brucellosis from the Park's herd and manage its population within the confines of available rangeland.

Question. Mr. Secretary, it is my understanding that you have finally taken a role in this discussions on this issue. With this in mind I would like to know why it took so long for you to come to the table on this matter?

Answer. As you know, this has been a very critical and sensitive issue. I have been engaged in the ongoing discussions regarding the management of bison at Yellowstone. I would like to take this opportunity to reassure you that I am committed to making progress towards a long-term solution for bison management that is acceptable to all parties involved in this process.

APPROPRIATE FUNDING MECHANISMS

Question. Mr. Secretary can you provide the committee with your position on the issue of funding of grants from the federal government? Do you in your position believe more in competitive grants or do you have faith and a commitment to the formula form of providing funding for agriculture research?

Answer. Federal grant programs provide the most effective mechanism for eliciting and supporting meritorious science being conducted by the land-grant universities, public and private universities, Federal laboratories, and other research institutions and individuals across the country. Federal dollars often support highly innovative research which requires an investment in time and money to which private industry often cannot commit.

However, Federal formula funding is also necessary to have a balanced funding portfolio. Formula funding for the land-grant universities continues to provide stable support for core university staff, operations, and equipment. Formula funding is also used to support on-going research projects which provide the information required to respond to critical issues currently faced by the agricultural community.

FEDERAL SUPPORT FOR AGRICULTURAL RESEARCH

Question. Mr. Secretary, could you provide me and this committee with any and all information you have of organizations outside the Federal government that are in a true position to pick up the role of USDA in agricultural research? I would like to find out where you expect the slack to be picked up and how you can justify the funding you have established at this time?

Answer. The USDA budget for agricultural research in fiscal year 1998 is \$1.8 billion, and represents a continuing strong commitment to that activity. Our role is to address research issues that are national and regional in scope, and long term and high risk in nature. Within the constraints of our budget and in order to ensure that we provide the resources necessary to work on those programs and new issues of highest priority in the broad national interest, we have proposed termination of some projects and activities judged to be less critical at this time. USDA has not specifically suggested that the terminated research be picked up by other organizations outside the Federal government.

However, other organizations also conduct research relevant to agriculture. Land-grant institutions, for example, are well noted for their research capabilities. Some industry or other private organizations are also involved in agricultural research. However, they tend to focus on projects that solve a specific industry problem or where there is financial profit. We recognize that both state and private institutions, like the Federal government, are experiencing financial constraints, which limits their level of research.

To the extent a particular problem or research activity is truly essential to a state, local or private sector group, they need to go through the same difficult priority setting process, as USDA has done, to decide on how best to allocate their available resources. All Federal agencies, universities and private industry need to work

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together in partnership to assure a well-balanced agricultural research agenda that collectively serves national, regional, state and local agricultural interests.

JUSTIFY REDIRECTION OF RESEARCH DOLLARS

Question. Mr. Secretary, I know you are aware of the many threats, including kernal bunt, foreign competition, that face our producers in the world market. Can you explain to me how you can justify the redirection of research dollars at a time when our yields on crops are dropping and when we face the problems of outside pressure on our crops.

Answer. Federal resources are being curtailed government-wide in an effort to reduce the deficit and help balance the Federal Budget. The Administration and the Congress are examining all programs in order to generate savings that will enable a leaner, more responsive Federal government that will provide for the most essential services to promote the Nation's economy, sustain the environment and improve the lives of all Americans.

The ongoing ARS research programs that have been identified for termination have been deemed less critical for ARS to continue in light of higher priority research needs and important agricultural problems. The savings achieved will be redirected to finance higher priority agricultural research initiatives recommended by the Secretary and the Administration in accordance with the President's budget.

Finally, we believe the trend in total factor productivity—a broad measure of output per unit of purchased inputs, labor, and capital rather than just yields per acre, is more appropriate indicator of the return on investments in agricultural research. The trend in factor productivity is encouraging. In the period 1948–1993, the productivity increased at an annual rate of 1.8 percent.

DISASTER ASSISTANCE

Question. Mr. Secretary, I understand that you have the authority to establish an emergency committee made up of leaders of the various agencies in the States. Mr. Secretary, can you explain why these committees don't seem to be functioning in the many States in the west that are suffering through very difficult conditions this winter?

Answer. A USDA State Emergency Board (SEB) is established in each State and in the Caribbean Area. The boards constitute the organization responsible for carrying out USDA's national security and emergency functions. The boards consist of representatives from the following: Farm Service Agency, Animal and Plant Health Inspection Service, Food and Consumer Service, Forest Service, Food Safety and Inspection Service, Natural Resources Conservation Service, National Agricultural Statistics Service, and Rural Utilities Service. The SEB's are functioning and meet on a regularly scheduled basis and when needed. For example, SEB's in Montana, North Dakota, and South Dakota have reviewed or will review the Damage Assessment Reports required for those States' Secretarial Designation requests.

Question. I cannot understand how people sitting in Washington can look at news reports and think that the only disaster in the mid-west this year occurred in North and South Dakota. Mr. Secretary, storms do not understand State lines. Can you explain the process for declaring feed assistance disaster for the States?

Answer. Requests for FSA implementation of feed assistance programs originate from county committees which are composed of producers and ranchers in the local communities. However, the Federal Agriculture Improvement and Reform Act of 1996 (the 1996 Act) suspended, through the year 2002, several provisions of the Agricultural Act of 1949, including all Livestock Feed Programs and the Indian Acute Distress Donation Program. With the exception of 210 counties in four States that were authorized to provide assistance before the suspension, most livestock producers were left without any viable emergency feed assistance programs for the 1996 crop year.

USDA implemented the Disaster Reserve Assistance Program (DRAP) for the 1996 crop year only on the basis of an FR Notice published on October 29, 1996. Funding for the program was provided by sales of disaster reserve stocks. The Disaster Reserve was authorized under the 1970 Act, Section 813(c). A concurrent resolution of Congress in 1996 provided authority for the Secretary to use these stocks. DRAP has been authorized in 463 counties in 20 States, and has eligibility criteria similar to the former LFP; however, DRAP provides a 30 percent cost share rather than 50 percent. No authority currently exists beyond the 1996 crop year for this program. Proposals are being developed to utilize the provisions under the Agricultural Act of 1970 to operate emergency programs for 1997 and future years; however, funds are limited.

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In response to severe winter weather in the Plains, USDA developed and delivered the Emergency Feed Grain Donation Program (EFGDP) in North and South Dakota, and the Foundation Livestock Relief Program (FLRP) was implemented in North and South Dakota, portions of Minnesota, and in several contiguous counties in adjacent States. Authority for the program was an Interim Rule, effective January 10, 1997, which amended 7 CFR Section 1439.402(a) to read: "(a) Assistance is for eligible livestock that are commingled, stranded, and unidentified as to the livestock owner. . . . Such losses must occur during the 1996 crop year because of snow or freezing conditions where a emergency declaration has been made by the President and while emergency snow conditions exist as determined by DAFP."

According to this Interim Rule, the President must have made an emergency declaration for a State or county as a condition of eligibility for initiating this program. The entire States of South Dakota, North Dakota, and certain counties in Minnesota were declared disaster areas by President Clinton. The FSA Deputy Administrator for Farm Programs (DAFP) determined that all counties in North and South Dakota met all eligibility requirements for EFGDP, and that all counties in North and South Dakota, counties contiguous to North and South Dakota, and counties in Minnesota for which a Presidential disaster declaration was made, were eligible for assistance under FLRP.

As indicated above, although EFGDP benefits were limited to North and South Dakota, FLRP benefits were available in North and South Dakota, and certain counties in Minnesota, Iowa, Nebraska, Wyoming, and Montana.

Question. In Montana this winter we have seen people feeding in October who are not usually scheduled to feed until late spring. We have cattle starving because of the conditions of the range. They cannot get to the sod and find the forage necessary to continue. Yet it took until January for the department to address this situation. Then it took another two weeks to get the information into the hands of those people who need the help. Could you explain this?

Answer. As indicated in an answer to another question, the 1996 Act suspended all emergency livestock feed programs beginning with the 1996 crop year through the year 2002. Emergency livestock feed assistance was implemented for the 1996 crop year on an ad hoc basis on the basis of an FR Notice published on October 29, 1996. Funding for the programs was provided by sales of disaster reserve stocks. The Disaster Reserve was authorized under the 1970 Act, Section 813(c). A Presidential designation in 1996 provided authority for the Secretary to use these stocks.

Although much of the fall grazing acreages in the Northern Plains were covered by snow in November, emergency conditions did not ensue until severe storms and extended sub-zero temperature conditions occurred, beginning in January. At that time, assistance was requested from USDA, and Secretary Glickman responded by initiating the EFGDP and FLRP programs, effective as early as January 10, 1997.

PACKER CONCENTRATION

Question. Mr. Secretary, what are the Department's plans for continued investigation into what is happening in regards to packer concentration?

Answer. I established a task force in the Department co-chaired by the Assistant Secretary for Marketing and Regulatory Programs and the Chief Economist. The Department has already (1) broadened the coverage of market reports to include the volume of slaughter cattle contracted for sale, (2) expanded reporting of livestock and poultry markets to include value-based pricing indicators (ie., premiums and discounts) and, (3) sought comments on the petition for rulemaking from the Western Organization of Resource Councils (WORC) requesting USDA to restrict certain livestock procurement practices. We are also seeking comments regarding regulations to address contract poultry grower issues.

CONSERVATION RESERVE PROGRAM

Question. I would appreciate you explaining to me the process of the determination of lands that will be eligible for admittance into the Conservation Reserve Program. I would also be very interested in the process that was used in the rule making procedure. I am greatly concerned that the way the rules were written that you provided no opportunity for Congressional review. We have numerous inquiries in our offices as to what happened and why it happened in the way it did.

My question is, how can you justify making almost half of the crop land in America eligible for the enrollment in the program, when the acreage for inclusion in the program is capped at 36.4 million acres?

Answer. The focus of CRP involves three major objectives, including reducing soil erosion, improving water quality, and enhancing wildlife habitat. Our determination to include a larger pool of eligible acreage ensures that acreage with the greatest

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environmental benefits, considering all program objectives based on the environmental benefits index, will be selected. It was also decided that all land classified as Highly Erodible Land should be eligible to be offered for CRP since those lands are subject to conservation compliance provisions.

Also, because no more than 25 percent of the cropland in a county can be enrolled in the program at one time, a significant amount of otherwise eligible land could not effectively compete for enrollment. Once a county has reached the 25 percent limit, enrollment generally ceases, even for lands that may be eligible and rank higher based on EBI scores than other accepted lands in another county that has not reached the 25 percent limit. Thus, of the 230 million to 240 million acres, about 55 to 60 percent of the 420 million acres of U.S. cropland in 1992 (including cultivated and non-cultivated cropland and CRP lands), that are eligible based on environmental and cropping history criteria only about 100 million acres (less than 25 percent of U.S. cropland) could ever really have a chance to be enrolled.

After the proposed rule was published in September 1996, 3,467 comments were received which were reviewed by National, State, and local FSA employees to categorize by subject. An interagency team composed of several USDA agencies, United States Fish and Wildlife Service and the Environmental Protection Agency developed issues which were reviewed by NRCS and FSA field employees and a final rule was published in February 1997. USDA is committed to moving forward with the sign-up and notifying producers as soon as possible.

ROLE OF THE SECRETARY OF AGRICULTURE

Question. In my statement, I mentioned the problems my staff faced in scheduling a meeting with you. On numerous occasions they called your office over a two week period of time. On one occasion they were told that you were on travel and that they would get back to us to schedule a meeting. Mr. Secretary, we never heard from them. I wonder if this is commonplace in the department and if you can assure me that this type of action was an oversight or what exactly occurred here.

Answer. I regret that there was a misunderstanding regarding our efforts to schedule a meeting with you and other members of the Montana congressional delegation on February 27. Coordinating the schedules of one Congressman, two Senators and two Cabinet Secretaries is never an easy task, but I am happy that ultimately we were able to arrange a meeting to discuss the bison issue. I am sorry that your staff was apparently not contacted directly with respect to the scheduling of this meeting. However, I am told by our scheduling office that it is easier to coordinate delegation-wide meetings when one congressional office serves as the principle point of contact for the scheduling of such meetings. In most cases, this minimizes confusion and misunderstandings. I regret that this was not the case in this instance.

Question. Could you provide me a brief summary of what plans are in the coming year to get out in the country and talk about the agriculture producers in our country?

Answer. Throughout my 18 years in the United States Congress and during the two years as Secretary of Agriculture, I have traveled to 37 states visiting both rural and urban communities impacted by USDA programs and services. The members of my subcabinet and I are tireless advocates for all Americans living in rural communities and agricultural producers, especially family farmers. Last year alone 1 million Americans moved back into rural communities, and rural incomes—both on and off the farm—are steadily climbing. I have traveled from Indiana where I met with producers to discuss corn and row crop issues to the central valley of California where farmers and I talked about vegetable harvesting and international trade. I have flown around North Carolina to view hurricane damage and flown to Indonesia to increase U.S. agricultural markets abroad. Everyday, my subcabinet and I work to ensure that the United States is the number one agriculture producer in the world.

At USDA, we are changing the way government does business by increasing opportunities for all stakeholders—consumers, producers, and industry—to have a voice in policy development. After attending countless listening sessions on issues such as concentration, food safety, dairy pricing, and civil rights—we have taken decisive action to make things better. My plans for the coming year are to take every opportunity I get to listen to agricultural producers and rural Americans and serve as their advocate at home and abroad.

Question. What do you see as your role for being the primary spokesman for agriculture in America? I would hope that you will be more involved than I have witnessed in the past.

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Answer. Most Americans do not realize how much they are touched each day by the programs and services of the United States Department of Agriculture. As an 18 year Congressman and now as Secretary of Agriculture, my job has always been to educate Americans that from the food we eat, to the clothes we wear, to the soil we farm and the streams we fish, USDA programs affect the quality of life all Americans enjoy. USDA programs impact the American landscape from our National Forests to the great plains, soil conservation, agriculture research, and food and nutrition programs—they are all a part of USDA.

Although the recent Farm Bill significantly reduced the Department's role in production agriculture, there is still much the Department is doing to ensure the continued economic prosperity of the U.S. agricultural sector. We are working to expand trade opportunities, promote a fair and competitive marketplace at home and abroad, and improve the safety net for farmers. Also, the research the Department conducts helps farmers to be more productive, more environmentally conscious, and more profitable, all at the same time. American agriculture has seen a lot of change and progress, and the future holds even more. As the primary spokesman for agriculture, I want to help farmers and ranchers take advantage of the tremendous opportunities this new era in agriculture offers.

FARM SERVICE ADMINISTRATION

Question. It is my understanding that the Administration looks to reduce the staffing of the field offices in the states. That there is a movement afoot to make the employees of the county offices federal employees. Could you explain the entire process by which you are looking to reduce the Farm Service Administration at the state and county level?

Answer. The fiscal year 1998 President's budget anticipates reducing the Farm Service Agency's employment by approximately 2,100 staff years from fiscal year 1997 estimated levels. This reduction, primarily in the field, reflects the reduced workload associated with the programmatic impacts of the 1996 Farm Bill and anticipated closing of another 500 USDA field service centers by 1999. We are uncertain at this time of where the employee reductions and office closures will take place because agency and USDA plans have not been finalized. We anticipate spending much of fiscal year 1997 analyzing our delivery systems for additional opportunities to achieve greater efficiencies in the Farm Service Agency and other agencies located in the field. FSA and other program delivery agencies face a different future today than they did one year ago. The 1996 Farm Bill significantly changed FSA workload requirements and further study is needed. To assure that USDA provides the best service possible to our customers, any decisions to close USDA field offices or reduce an agency presence in a USDA service center must be done in coordination with other agencies located at the site, including Rural Development and Natural Resources and Conservation Service. No additional office closures will take place until the situation has been thoroughly studied and USDA plans have been shared with Congress and USDA's customers.

Question. What is the plan to make county directors and staff Federal employees?

Answer. While the Federal Crop Insurance Reform and Department of Agriculture Reorganization Act of 1994 provides that Federal and non-Federal employees could be used interchangeably in local USDA offices in the implementation of programs and activities assigned to the FSA, operating a dual employee delivery system at the county level has been difficult. Recently, the USDA Civil Rights Action Team (CRAT) recommended that the FSA county committee system be modernized by converting all county non-Federal employees to Federal status. This will require legislation.

Question. Would you not agree that this will move the focus from local control to a more centralized Federal control system?

Answer. Converting non-Federal county employees to Federal status would remove local county committee control from employment decisions in FSA county offices. However, this change would not significantly lessen or eliminate the county committee program delivery system because county committees would retain most of their responsibilities for programs and other functions delegated to them by the Secretary of Agriculture and the FSA Administrator.

I support the effort to convert non-Federal county employees to Federal status for the following reasons: 1) FSA Federal and non-Federal county employees are working side-by-side, and as farm credit functions continue to be integrated, are, in many cases, doing the same work. 2) having all FSA county employees under one Federal personnel system makes it easier for FSA to supervise and deliver programs in the field; treat all county employees fairly, consistently, and equitably; and extend Career Transition Assistance Program benefits to all county employees who are invol-

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untarily separated. 3) as pointed out by the CRAT report, converting non-Federal employees to Federal status makes all county employees accountable to Federal regulations and minimizes the effect of farmer elected county committees on employment decisions.

Question. Can you describe the process that will be used to reduce the state office numbers?

Answer. No agency or USDA plans for reducing employees or number of offices have been finalized. The fiscal year 1998 President's budget proposes a reduction of 2,119 staff years, of which 269 are federal staff years and 1,850 are non-Federal staff years. These staffing reductions reflect the programmatic impact of the 1996 Farm Bill, and imply a reduction of about 500 local offices providing service delivery. In order for FSA to meet the changing mission of the agency, FSA is in the process of preparing strategic plans to address these issues and determine program delivery changes which will provide an optimum organizational structure to reduce costs and streamline the delivery of services. However, no plans have been approved at this time. Once plans are finalized, FSA intends to offer buyouts in an effort to minimize involuntary separations. However, it is unlikely that all reductions can be achieved through buyouts. After we have offered a voluntary buyout, then FSA will use RIF's to meet reduction targets. Federal RIF procedures (using tenure, veterans' preference, performance, and length of service) will be used to determine which Federal employees will be RIFed. Internal FSA RIF procedures (identifying the employees who are best qualified to perform work) will be used to determine which non-Federal employees will be RIFed. If non-Federal employees are converted to Federal civil service status, they will be subject to Federal RIF procedures after the conversion.

GRAIN INSPECTION, PACKERS AND STOCKYARDS ADMINISTRATION

Question. Mr. Secretary, you have been blessed by having a very competent person in the leadership position at GIPSA. Can you explain to me how it is that you expect these people to address the continuing concerns of the agriculture producers in our country, without providing them with the funds to do any such investigation and prosecution?

Answer. An additional \$2.8 million is included in the fiscal year 1998 Budget request for GIPSA to increase their capability to monitor and analyze packer market competition, study the implications of structural change and behavioral practices in the meat packing industry, address poultry compliances issues, and enable the electronic submission of industry data. These additional resources will enable an increased capability to support legal actions that require complex economic and statistical analyses.

WIC SUGAR LIMIT

Question. I wrote to you in June 1996 regarding USDA's Notice of Intent to Propose Rulemaking regarding the Special Supplemental Nutrition Program for Women, Infants and Children (WIC). USDA proposed to review the nutritional regulations limiting the amount of sugar in WIC-eligible cereals. In my June letter, I expressed my support of WIC and the program's current cap on sugar content, given the importance of a healthy and nutritious diet to WIC recipients. I wanted to reiterate my support for the current limit on sugar content, and I again request any information supporting a review of this issue by USDA.

Answer. I am pleased to know that you, like many of your colleagues in Congress, are a supporter of the WIC Program. We periodically consider recent research findings and advice from leading professional health and nutrition authorities to determine whether revisions in Federal program guidelines or regulations are needed.

The March 1996 WIC Cereal Sugar Limit Notice stated that USDA was aware that the newer clinical evidence indicated that sugar consumption is not believed to be an independent risk factor in the development of the chronic diseases of coronary heart disease, noninsulin diabetes, obesity and hyperactivity. We used the public forum of a Federal Register Notice to solicit feedback from the broad sectors of the community on whether continuation of a Federal restriction on the amount of sugar allowed in adult WIC cereal is still warranted. Among the many comments we received were suggestions that neither sugar nor any other attribute of WIC foods should be viewed in isolation, but rather they should be reviewed in the context of all of the WIC foods and their use in achieving WIC goals.

In follow-up, the Department will publish a notice in the Federal Register to summarize the public comments USDA received on the March 1996 Notice and to announce the Department's decision to examine WIC foods for consistency with the 1995 Dietary Guidelines for Americans and supporting scientific knowledge. USDA's

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Food and Consumer Service, in conjunction with the Center for Nutrition Policy and Promotion, will be conducting a scientific review of the WIC foods. Until this review is completed, the Department will not be making any changes in the current Federal sugar cap for WIC cereals.

QUESTIONS SUBMITTED BY SENATOR BUMPERS

ORGANIC STANDARDS

Several years ago, Congress enacted legislation to establish federal standard for organic products of which there is a growing demand. Organic producers in Arkansas have shared with me their continuing frustration with the delays in USDA's promulgation of these standards.

Question. What is the status of this effort and when do you think these standards will be in place?

Answer. I share your frustration and have been assured that these are complex standards for a wide range of fruits, vegetables, nuts, field crops, livestock, dairy, and poultry. We anticipate that the proposed rule for national standards for organic products will be published this spring. In addition to standards for production, the national organic program will include provisions for labeling of organic products; certification of organic farms and processing facilities; USDA accreditation of private and State agents who will conduct certification; compliance and enforcement measures; user fees; and criteria for determining the equivalency of imported organic products. When the comment period on the proposed rule has closed, we will move as quickly as possible to address concerns that are raised and publish a final rule in time for the next crop season. Accreditation of private and State agents, and the certification of farms and processing facilities, would begin shortly thereafter.

Question. Can you provide information relating to the economic loss to the organic industry due to the failure to implement these standards?

Answer. The organic industry has been growing at a rate of 22 percent each year for the past six years. We estimate that the implementation of national organic standards will allow the industry to continue to grow at this rate, or higher, for several more years, particularly with the introduction of organically produced meats and poultry.

PROGRAM TERMINATIONS

Question. The FAIR Act of 1996 terminated many programs that had long been relied upon by farmers across America. Even before the 96 Act, congress had taken other action to terminate or vastly modify various agricultural programs. The Honey Program comes quickly to mind. I know the 96 Act creates a commission to evaluate the direction farm policy should take in the 21st Century. But I am wondering what evaluations you may have already made about the short and long term effects of terminating programs like the Honey Program? Is USDA following the effects of the termination of farm programs?

Answer. USDA continues to establish supply, use, and price estimates for a number of crops that remain eligible for production flexibility contract payments but were subject to the termination of programs such as the Acreage Limitation, Cash Land Diversion, and Farmer Owned Reserve Programs.

In the case of honey, all prior program provisions and payments were terminated. No formal evaluation of effects of this program termination has been initiated and accounting for honey program supply and use at the national level has been discontinued. However, honey marketing information continues to be collected. The monthly National Honey Market News continues to be published by USDA's Agricultural Marketing Service. This publication tracks State-level honey prices and weather, disease, and marketing events affecting the industry. Additionally, USDA's National Agricultural Statistics Service is continuing its survey and reporting of the number of honey producing colonies, yield, production, stocks, average price per pound, and value of production. These information collection activities do not constitute an evaluation of the full effects of the termination of the honey program, but they do help us monitor the situation in the honey production sector.

Question. What has been the effect of eliminating the Honey Program on the pollination of crops?

Answer. USDA is not currently examining the effects of the elimination of the Honey Program on crop pollination. In May 1994, USDA's Economic Research Service published "The U.S. Beekeeping Industry," a study directed by Congress. That report included a profile of the pollination industry but did not establish any particular linkages between pollination services and provisions of the Honey Program,

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so a baseline relationship between the old program and the availability of pollination is lacking.

The marketing loan provision for honey terminated effective with the 1994 honey crop, and loans were available only through the 1995 crop. However, in August 1995 the U.S. entered into an agreement with the Government of China limiting Chinese honey exports to the U.S. and establishing a price floor for Chinese imports. This agreement is generally viewed as a major cause of the increase in domestic honey prices from an average of 53.9 cents per pound in 1993 and 52.8 cents in 1994 to 68.5 cents in 1995 and 89.4 cents in 1996. Over the same period, and in spite of these market-price increases, honey production has steadily declined. USDA estimates domestic honey production at 230.6 million pounds in 1993 and at 198.1 million pounds in 1996. Some industry opinion is that price increases since 1993 have only offset operating-cost increases that have occurred due to mite and disease problems.

The steady decline in the estimated number of colonies (from 2.876 million in 1993 to 2.566 million in 1996) suggests an overall decline in pollination, and the cause of the decline in colonies appears to be mites and diseases and not the reduction/termination of price supports. It is widely held in the honey industry that mites and diseases have largely eliminated feral bee populations, thereby eliminating pollination unless provided by commercially managed colonies. The results of these mite and disease problems are lack of pollination or deformed fruits and vegetables due to reduced pollination.

Question. Is research on Honey Bee disease and similar topics keeping pace with this problem?

Answer. Research in honey-bee disease and mite control is not keeping pace with the growth of these problems, as evidenced by the dramatic decline in the number of colonies (from 3.528 million in 1989 to 2.566 million in 1996). There is evidence that mites are becoming resistant to the one insecticide that has been in use, and effective treatments are not yet perfected for the viral, bacterial, and fungal diseases that result in colony loss. Further reductions in colony numbers are anticipated and reduced commercial pollination services may result.

Question. What other problems do you foresee for the termination or substantial modifications of other traditional farm programs?

Answer. The new Farm Bill has substantially modified many of our traditional programs. It is widely assumed that the termination of Federal acreage controls on crops previously managed by acreage reductions and land diversions will generate more price and income risk for producers and possibly more volatile prices for consumers. It has been difficult to separate the effects of programs from the effects of market factors on price volatility. However, the phase out of programs that provided price and income support signals the need for greater efforts within remaining programs to protect producers from income fluctuations. Thus, the Department is proposing an expansion of the revenue insurance programs and is proposing other steps to improve risk management programs.

Another concern is that any decline in income payments as a result of a program phaseout may make it more difficult for some commodities to compete in international markets that are heavily subsidized. And since export markets are crucial to the prosperity of many commodity producers, the effect of program changes on our ability to compete in these markets is an important concern. On the plus side, the modifications which increase producer flexibility to respond to market signals should enhance our competitiveness in international markets.

The Department will be studying the effects of changes made in the 1996 Farm Bill. Clearly, when programs are terminated or modified, substantial adjustments are required by producers and landowners. Our experience with program terminations is quite limited. The Honey Program was recently terminated as well as the Wool and Mohair Program. Both were rather specialized and its not clear yet what lessons can eventually be drawn from these cases.

The wool and mohair support programs authorized under the National Wool Act were phased out during the 1994 and 1995 marketing years, and the National Wool Act was repealed as of December 31, 1995. Since the program ended, USDA has maintained two annual reports—*Sheep and Goats* and *Wool and Mohair*—which indicate that both industries have continued a decline that began long before the program phase-out. USDA also has continued holding quarterly interagency meetings to derive supply/use estimates and projections for both commodities. However, USDA has not conducted a formal study to assess the effects of the termination of the program.

Although support to individual producers has been terminated, the Federal Agriculture, Improvement and Reform Act of 1996 authorized up to \$50 million for a National Sheep Industry Improvement Center. One objective is to “strengthen and

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enhance production and marketing of sheep or goat products in the U.S." Rural Development is the lead agency for this effort.

FARM SAFETY NET

Question. I understand you will soon be sending to Congress a package of legislative proposals to improve the safety net for farmers and ranchers to help ease some of the harsh results of the FAIR Act of 1996. Included in that package will be a proposal to extend the period of time in which commodities may be held under CCC loan.

I have been hearing from farmers in my state, cotton farmers in particular, who are suffering terribly from falling market prices and whose CCC loans will be expiring this summer. For example, a cotton farmer in southeast Arkansas may have cotton under loan for \$0.52 a pound. The price on the New York Cotton Board is around \$0.73 a pound. The farmer may now be able to sell his cotton to a merchant for an \$0.08 equity giving him a total of \$0.60 a pound, far below the New York price. If the term of the loan could be extended, many farmers would be able to ride out the current marketing cycle. However, I fear many farmers in my state will not be able to stay in business long enough to wait for a lengthy legislative process to amend the 1996 Act.

What steps can USDA take immediately to reduce the harm to cotton farmers, and to farmers generally, resulting from current market conditions?

Answer. Virtually no policy initiatives have been left to USDA under the Federal Agriculture Improvement and Reform Act of 1996 (the 1996 Act) which could be used to strengthen prices. This is the primary reason that we have submitted our legislative proposal which would grant authority for 6-month loan extensions under certain market conditions. The tenor of the 1996 Act is that farmers will look more to the marketplace for their income and essentially requires that farmers learn new marketing techniques. At this point, we can only suggest that farmers try to hedge their crops on New York. Instead of selling loan equities to merchants, farmers do have the option of selling on New York, themselves, and receiving more than the merchants are offering.

Question. Is there anything USDA can do in this respect short of legislation?

Answer. The 1996 Act eliminated the authority for loan extensions, and we cannot use other legislation such as the Commodity Credit Corporation Charter Act as authority to do so. New authority must be enacted by Congress.

COUNTY OFFICE CLOSURES

Question. I appreciate your statement of recent days that county offices will not be closed without close examination of continuing demands for service delivery. Can you provide an idea of the type of criteria and timetables you will use in implementing further downsizing and office closures?

Answer. The fiscal year 1998 President's budget anticipates reducing the FSA's employment by approximately 2,100 staff years from fiscal year 1997 estimated levels. This reduction, primarily in the field, reflects the reduced workload associated with the programmatic impacts of the 1996 Farm Bill and the anticipated closing of 500 USDA field service centers by the end of 1999 as stated in the 1998 Budget proposal. Agency and USDA plans have not yet been finalized and will not be until after consultations with Congress on any further office closures. We anticipate spending much of fiscal year 1997 analyzing our service delivery systems in order to obtain an optimum organizational structure while stressing efficient and effective service to our customers. This includes contracting for an independent study to explore opportunities for further savings in FSA and NRCS.

Question. If we have no choice but to provide funding levels for personnel below the budget request, do you have enough buy-out or similar authorities to avoid the disruptive results of simple Reductions in Force?

Answer. The fiscal year 1998 President's Budget request for FSA Salaries and Expenses includes \$56.2 million in separation costs in order to achieve staffing reductions of 2,119 employees in fiscal year 1998. This amount includes \$6.7 million to separate 269 Federal office employees and \$49.5 million to separate 1,850 non-Federal county office employees. These estimates reflect the assumption that reductions-in-force will make up 75 percent of all separations since the number of employees eligible for buy-out is declining due to the major use of buyouts within the FSA over the last several years. If Congress appropriates 1998 funds below the budget request, the Agency would be forced to conduct an even greater RIF in fiscal year 1998. As stated, not all reductions can be achieved through buyouts since the number of remaining buyout candidates is insufficient to meet any additional staff reduction that reduced funding levels might require.

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MEAT AND POULTRY INSPECTION USER FEES

The budget again proposes user fees for meat and poultry inspection. This time, the proposal goes beyond previous efforts to recover the cost of second shift activities and would, instead, cover all in plant activities. This would cover roughly 70 percent of all FSIS costs and generate approximately \$390 million annually.

User fee proposals have been defeated in the past for a number of reasons and, obviously, this is a matter for the authorization committee. One of the reasons for these defeats has been a perception that having the companies paying for food safety inspection might be like the fox guarding the proverbial hen house.

Question. Is there a strategy whereby the imposition of these fees could be perceived as enhancing food safety and, thereby, improving consumer confidence?

Answer. The Administration believes that expanding the authority for the collection of user fees is essential to the successful long-term implementation of meat, poultry, and egg products inspection reforms, including HACCP. The collection of user fees will permit the agency to achieve dual goals of ensuring that the demand for on-site inspection services are met and the implementation of reforms to improve food safety are completed. Ensuring adequate inspection coverage and improving inspection processes will give consumers greater confidence in the safety of the American food supply. Some have indicated that the collection of user fees will compromise our ability to fulfill our obligation to ensure the safety of the food supply. This is not so. We currently collect fees for overtime holiday, and for providing voluntary inspection services to facilities handling nontraditional animals, which does not affect the manner in which we carry out our inspection responsibility.

CONSERVATION RESERVE PROGRAM

Question. You recently announced new rules to implement the Conservation Reserve Program (CRP) hoping to achieve a total enrollment of 36.4 million acres. CRP has been criticized for keeping valuable lands out of production and enrolling lands of questionable environmental benefit.

Your final rule, in my opinion, is well suited to meet the objectives of CRP that I think are worthwhile and of which I believe will silent past criticisms. Still, there are those who might question the fact that, technically, millions of acres will be eligible that are of marginal environmental value. I understand the use of your Environmental Benefits Index should result in the enrollment of only the most environmentally sensitive lands.

Can you explain how you will regard the "cost" factor of your eligibility criteria to make sure lands of value environmentally will be enrolled instead of less advisable lands?

Answer. The cost factor is one component of the overall Environmental Benefit Index (EBI). The EBI is simply the sum of 6 environmental factors plus cost. The cost factor provides more points to offers with lower rental rates. If two bids had the exact same scores for environmental benefits, the offer with the lower rental rate would receive a higher score and would be ranked above the other offer. CRP rental rates are based on soil productivity; thus, the bid with the more productive land will rank lower than the less productive acreage. The decision on the weights to be used for the cost factor will be determined after signup concludes.

Question. How soon do you think you will have the results of your first sign-up under the new rules?

Answer. Our goal is to notify producers as soon as possible after signup concludes. We anticipate the fifteenth CRP signup to be the largest in the history of the program. This will present the Department many challenges but we are committed to getting the job done in a timely manner. All producers will be notified as soon as possible; however, due to the volume of offers to be processed, it is likely to be late May or early June before producers receive word on the acceptance or rejection of their offer.

FUND FOR RURAL AMERICA

Question. The Fair Act of 1996 provides you \$100 million annually for three years to fund research and rural development activities beyond the normal appropriations process. There has been concern that unless the Fund was used in a most innovative manner, there would be attempts to recapture those savings for shortfalls in other discretionary items.

Do you think the Fund for Rural America will meet the "innovative" test? Can you explain how your implementation of the Fund will do more than simply placing additional funds in select appropriations? How will you use the Fund to do what this subcommittee can't?

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Answer. As you are aware, I decided to use the Fund to augment the single family housing program level which, because of interest rate differences decreased from \$1 billion to \$525 million in fiscal year 1997. Using the Fund enabled us to increase the program level to \$740 million. We also used the Fund for Water 2000 projects, Rural Business Enterprise Grants, and to meet some other critical needs. I am convinced the Research component of the Fund will generate innovative projects that address both agricultural and rural development problems. In addition, I directed that a small part of the Fund be used to address some needs related to value-added cooperative development efforts. The announcement on the use of this funding will be forthcoming.

RURAL DEVELOPMENT PROGRAM

Question. The budget proposal calls for combining several rural development programs in order to give additional flexibility to State Directors. Previous appropriations bill have given you increasing levels of flexibility to mix and match rural development programs, Your proposal also calls for \$50 million for rural development grants to states.

Can you quantify the result of the flexibility in program delivery previously provided by appropriations acts? Even though \$25 million of the \$50 million in grants to states are "matching" grants, what assurance do you have that the states will spend an additional \$25 million from what they would otherwise spend? Have you examined the history of other federal economic development grant programs that were delegated to the states? If so, what were the fate of those programs? If we provide grants to the states, do you advise allowing the states broad use of those funds for any activity?

Answer. I understand that during 1996 there was 46 instances of State Directors transferring budget authority within the water and waste disposal loan and grant programs. The vast majority of the transfers were from grant to loans, indicating to me that the State Directors were exercising good judgement by funding more projects than they would have under previous authority. A total of 30 state offices transferred budget authority from grants to loans. The monetary effect of these transfers was \$9 million in grant generated \$40 million more in loans. Sixteen states transferred budget authority from the loan program to grants, thereby reducing available loan funds by \$9.3 million to make \$2 million in grant funds available. One State Director shifted all of the grant funds to loans.

I understand the 1996 Farm Bill requires that States not supplant normal state expenditures with the funds made available under RCAP. We would of course have to monitor that, but there is some assurance the funds would be used for additional projects. I agree that the history of block grants is checkered. However, the Fair Act requires that the States expend the block grant funds for purposes similar to those funded by our agencies.

MUNICIPAL ANNEXATION

Question. Section 1926(b) of the Consolidated Farm and Rural Development Act imposes prohibitions on the curtailment or limitation of services provided through certain USDA programs.

Please provide your view of what a repeal or substantial modification of this section would do to the delivery of services to rural areas and additional cost to USDA that might result through defaults or by other means. What is the Department's position on any changes to this provision?

Answer. There are several areas of concern when discussing the annexation of property served by USDA financed water and waste systems. These concerns are:

1. Many rural systems serve users that are sparsely located and not easily served by traditional municipal systems. If part of the system is annexed, the remaining system must remain viable, but to do so may require increases in user rates that would make the system non-affordable to most users. If that occurs the entire system fails.

2. If all or part of a system is annexed, the USDA borrower must receive appropriate value for it because the borrower is still obligated to repay the USDA loan. If the system involves grant funds, then the value must reflect the value of the grant when originally financed. Otherwise the system is obtained at less than true value.

3. To ensure protection of loan security, USDA must approve any lease or sale that pertains to a USDA financed system. In many parts of the country the service areas are defined by State or local jurisdictions and when the service area is defined prior to development of systems, the need to invoke protection under section 1926(b) is alleviated. However, other States do not establish legal boundaries. It should be

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noted that section 1926(b) does not prevent the annexation of areas into a city. It only prohibits cities from taking USDA financed systems and the customer base that is needed to ensure that the debt is repaid.

FALLING TRADE PROJECTIONS

Last year, you reported that U.S. agricultural exports were approaching \$60 billion and you anticipated we would exceed that amount during the current fiscal year. Earlier this week, you released figures showing the estimate for fiscal year 1997 is \$55.5 billion and projections for fiscal year 1998 are only up to \$56.5 billion. These figures are well below the \$59.8 billion of fiscal year 1996 let alone the anticipated \$60 billion plus.

Question. To what can you attribute this decline in export activity?

Answer. The Department first released its \$60 billion forecast for fiscal year 1996 U.S. agricultural exports in February 1996, after only the first quarter of trade data was available. The Department held to the \$60 billion figure when trade forecasts were reexamined in May and August of 1996. When the full fiscal year 1996 trade figures were available in November 1996, the figure came in at \$59.8 billion—a difference of less than one-half of one percent from the forecast which the Department had carried for nine months.

In December 1996, the Department released its second fiscal year 1997 export forecast placing the value at \$55.5 billion. In February 1997, the fiscal year 1997 export forecast was revised upward \$1 billion to \$56.5 billion. This is the Department's current fiscal year 1997 forecast. There are no official Department trade forecasts for fiscal year 1998.

The decline from \$58.9 billion in fiscal year 1996 to an estimated \$56.5 billion in fiscal year 1997 is mainly due to reduced export prospects for U.S. wheat and corn which should more than offset expected export gains for U.S. soybeans and products, and high-value meat and horticultural products. Both lower prices and lower shipment volumes are expected to reduce export value for U.S. wheat and corn. With respect to wheat, Argentina and Australia have just harvested their largest wheat crops on record, and the European Union has also harvested a large crop. Faced with greater competition in global export markets, world prices have weakened and U.S. export volume is expected lower. With respect to corn, larger crops in some key importing countries and increased availability of foreign feed grain supplies, including feed-quality wheat, are expected to reduce U.S. corn export value and volume.

Question. What outlook do you have for the years beyond fiscal year 1998?

Answer. With respect to long-term trade forecasts, the Department's Economic Research Service publishes its "Agricultural Baseline Projections" twice a year. ERS currently projects U.S. agricultural exports to the year 2005, which reflect the U.S. agricultural policies set in place by the 1996 Farm Bill as well as other important domestic and international factors affecting trade. According to ERS's latest projections, published in January 1997, U.S. agricultural exports initially decline from the record set in 1996, but then begin a steady rise in 1998 to approach \$80 billion by 2005.

From 1998 to 2005, high-value product exports are projected to account for about 60 percent of total U.S. agricultural exports led by export gains in horticultural and animal products. Bulk commodities should continue to account for about 40 percent of the total, which implies that export gains for bulk commodities will remain above the gains recorded in the late 1980's and early 1990's.

It is important to understand that such long-term projections are based on trend analysis and, therefore, cannot be expected to anticipate the inevitable shorter-term, year-to-year variations from the estimated trends. The bulk commodity portion of U.S. agricultural exports is especially hard to forecast due to the difficulty of predicting short-term supply "shocks"—that is, annual changes in U.S. and major foreign producer crop size.

PUBLIC LAW 480 REDUCTIONS

The budget proposal provides a reduction of Public Law 480 Title I by \$117.2 million in program level. In addition, the budget calls for a rescission of \$50 million in budget authority in fiscal year 1997. In particular, the rice shipments under Title I are projected to drop from 126,000 metric tons in fiscal year 1997 (without the rescission) to 17,000 metric tons in fiscal year 1998.

Question. In view of declining trade figures, why has USDA called for further reductions in Title I?

Answer. The budget proposes reduced funding for Public Law 480 Title I in fiscal year 1998 because of the constraints on discretionary spending we face. In order to

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meet the President's goal of balancing the budget by 2002, we are required to make difficult choices and propose lower funding for certain programs.

Question. Since Title I levels can be transferred to Title II, does this action indicate less of a need for Title II?

Answer. The reduction proposed for the Title I program is not directly related to funding requirements for the Title II program. However, in developing our Public Law 480 budget proposals, we have maintained funding for Title II donations at the current year level because of its humanitarian objectives, while proposing a reduced program level for Title I.

RICE TRQ IN THE EU

As part of the GATT Agreement, the U.S. was to achieve duty-free access for rice imports equalling 38,000 tons into the EU. To date, no U.S. rice has been exported to the EU duty-free. I understand you have little if any authority to take action until an agreement within the U.S. rice industry has been achieved.

Question. Can you provide your thoughts regarding ways to resolve this issue?

Answer. As compensation for lost trade resulting from the accession of Austria, Finland, and Sweden to the European Union, an agreement between the United States and the EU was negotiated under the GATT and went into effect on January 1, 1996. As part of this compensation package, the EU agreed to open a tariff-rate quota or TRQ of 63,000 metric tons for semi-milled and wholly milled rice at a zero in-quota duty, of which 38,000 metric tons was reserved for the United States. The compensation also provided for a TRQ of 20,000 metric tons of husked brown rice to enter at an 88 ECU/MT in-quota duty, of which 8,000 metric tons was reserved for the United States.

In July 1996, the EU passed a regulation implementing the TRQs for rice, but this did not include a system to allocate the U.S. portion of the TRQs. The Commission was waiting for the U.S. industry allocation system to be finalized before implementing the TRQs for the United States. In order to implement a system for allocating the U.S. share of the TRQs, several U.S. industry groups have applied to the U.S. Department of Commerce for an Export Trade Certificate of Review. However, largely because of the lack of agreement within the U.S. industry, the EU has not yet opened the TRQs for either 1996 or 1997.

There seem to be only three possible ways in which this issue could be resolved. Ideally, if the U.S. industry could come to agreement on a way to allocate the quota, the U.S. industry could benefit from the quota rents which are worth about \$30 million a year. Alternatively, if the U.S. government were given the ability to allocate quotas, the benefits would still remain on the U.S. side. If neither of these options is feasible, however, it will be necessary to allow the EU to allocate the quotas; this would deprive the United States of the quota rents, but would at least preserve the market access of the TRQs.

Question. What do you see as being at stake for the U.S. rice industry long-term?

Answer. The stakes are substantial. As a result of the three new countries acceding to the EU, the United States lost a considerable amount of rice trade. U.S. exports of milled rice to those countries fell from an average \$17.1 million in 1992-94 to an average \$3.8 million in 1995-96; exports of brown rice to the three countries fell from \$1.1 million in 1992-94 to \$23,570 in 1995-96.

Question. In what way might this dispute spill over into other trade issues such as trade barriers such as with Chile or China?

Answer. The way in which this issue is resolved could have an impact on how we negotiate quotas with other countries in the future, i.e., whether we try to achieve—either for the U.S. industry or for the U.S. government—the quota rents inherent in any TRQ.

QUESTION SUBMITTED BY SENATOR KOHL

STATE TRADING ENTERPRISES

Mr. Secretary, on the issue of international trade, we have had several discussions about our mutual concerns about the activities of the monopoly state trading enterprises, such as the New Zealand Dairy Board and the Canadian Wheat Board, and some of the unfair trade advantages that those groups have in the world market. And I appreciate your efforts to make this matter a priority in international negotiations, such as the recent WTO Ministerial Meeting in Singapore.

Question. Given the growing importance on this matter, and the potential negative effects of STEs on the international trade potential of so many commodities of importance to the United States, would you be willing to establish a special STE

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Advisory Group? We have such a low threshold of knowledge on this issue, and there is so much at stake, I believe a more concentrated effort could be useful.

Answer. The import and export activities of STEs, along with other issues such as tariff reductions, definitions of subsidy policies, and further cuts in subsidy levels, continue to be priority issues for the Department as we assess compliance with Uruguay Round commitments and our goals and objectives for continuation of the reform process in agricultural trade. Regarding any WTO-inconsistent policies of STEs, we welcome industry input, including through our Agricultural Technical Advisory Committee and Agricultural Policy Advisory Committee system. Such input would supplement the considerable amount of analysis of STEs which has already been done by the Department and the General Accounting Office.

Additionally, as we prepare for the continuation of agricultural negotiations in the year 2000, we would welcome industry input on negotiating objectives with respect to STEs. We do not believe that a special advisory group is required at this time, as appropriate mechanisms already exist, but welcome hearing your concerns.

QUESTIONS SUBMITTED BY SENATOR BYRD

WATER 2000

Question. What progress did the U.S. Department of Agriculture (USDA) achieve on meeting the goals of Water 2000 in West Virginia in fiscal year 1996?

Answer. In fiscal year 1996 the USDA achieved significant, steady progress in the state of West Virginia toward the safe drinking water service targeting goals of Water 2000.

In total, the department invested \$23.3 million in Water and Wastewater loans and grants (\$13.1 million in loans, \$10.2 million in grants) in water and wastewater projects in West Virginia. This investment funded a total of 22 drinking water projects, and three wastewater projects.

Of the 22 water projects, 14 were deeply targeted Water 2000 investments to the projects of lower income communities with significant numbers of unserved or under served residents.

Finally, of the 54 projects funded by the department in mid-July of 1996 as part of its Water 2000 nationwide roll-out, four were in West Virginia (Page-Kincaid Service District, Downs Public Service District, Leadsville, and Red Sulphur Public Service District). Of a total of \$58.7 million in loans and grants invested in the roll-out, \$2.25 million went to West Virginia.

These numbers show that despite a 25 percent overall reduction in funds for fiscal year 1996, the department made measurable progress on Water 2000 in West Virginia, the state with the fifth greatest need in the nation for targeted safe drinking water investments.

Question. What progress does the agency expect to make in fiscal year 1997?

Answer. For fiscal year 1997, a 35 percent increase in the loan and grant program level means that the department will fund substantially more targeted drinking water projects in West Virginia than in fiscal year 1996.

Our staff in West Virginia are working closely with the State Infrastructure Fund to leverage their loan and grant dollars. Such co-funded proposals compete very well for national USDA discretionary funds.

Question. What progress does the agency expect to make toward the goals of Water 2000 with respect to the President's budget?

Answer. Within the President's request for loans and grants, the USDA will continue to make significant, steady progress toward the goals of Water 2000. Nationwide in fiscal year 1995 and fiscal year 1996, combined, the USDA invested \$351,960,836 in deeply targeted loans and \$195,306,345 in deeply targeted grants, for a total of \$547,267,181, in 535 Water 2000 projects. This investment, however, still leaves a gap of over \$2.8 billion to reach the at least \$3.4 billion needed (according to the USDA's 1995 Water 2000 Needs Assessment) to correct the nation's most serious rural safe drinking water problems.

Question. Are there any barriers that the agency can identify that are preventing West Virginia agencies from receiving USDA telecommunications grants and loans?

Answer. There are no barriers in West Virginia that we are aware of. We have received very few applications from West Virginia over the past four years of the program.

FSA DOWNSIZING

Question. How will the expected Farm Service Agency downsizing impact West Virginia?

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Answer. I cannot provide any details on that because no specific agency or USDA plans for reducing employees or numbers of offices, by State, have yet been finalized. Any decisions to close USDA field offices must be done in coordination with other agencies, including Rural Development and Natural Resources Conservation Service, and approved by me, after full consultation with Congress.

FLOOD CONTROL PLANNING

Question. In 1996, the President made five national disaster declarations for West Virginia as a result of severe flooding. The affected communities critically need leadership in developing flood control plans. Please provide recommendations on how the USDA might assist West Virginia.

Answer. In response to Congressional appropriations language, the Natural Resources Conservation Service (NRCS) is providing \$300,000 from the PL-534 program under Watershed Protection and Flood Prevention to develop community-based comprehensive resource management plans for communities devastated by the 1996 flood events. The funds are being used to secure Agricultural/Engineering consulting firms to develop a North Fork South Branch Potomac River Watershed Plan. The consultant will work under the direction of the NRCS Community Based Assistance planner and will provide direct assistance to the North Fork Watershed Committee.

Also, NRCS is working with other Federal agencies in West Virginia and other states where there has been a declared national disaster to implement guidance issued on February 18, 1997, by the Office of Management and Budget and the Council on Environmental Quality. This guidance establishes a goal that Federal agencies "...achieve a rapid and effective response to damaged flood and floodplain management systems that will minimize risk to life and property, while ensuring a cost-effective approach to flood damage mitigation and floodplain management and the protection of important environmental and natural resource values that are inherent to the floodplain and adjacent lands."

This guidance includes the following procedure:

1. Setup or use existing repair coordination team to review all needs and proposals
2. Include representative from applicable state and federal agencies
3. Make recommendations as to the appropriate program and measure to use in addressing the damages
4. Encourage local community involvement
5. Develop a flood response plan.

The local NRCS staff and the other agriculture agencies work together after each storm event or other natural disaster to identify the damaged areas and develop damage survey reports (DSRs). DSRs include the work needed and the estimated cost. Total costs are then included in a request for supplemental appropriations for the Emergency Watershed Protection Program (EWP).

AQUACULTURE

Question. While the National Center for Cool and Cold Water Aquaculture is under construction, what actions will the USDA take to expand cool and cold water aquaculture opportunities in the state?

Answer. The National Center for Cool and Cold Water Aquaculture (NCCCWA) could be operational as early as the year 2000. While the Center is under construction, USDA will take the following actions to expand cool and coldwater aquaculture opportunities in West Virginia:

1. The Agricultural Research Service (ARS) will continue to work closely with the Freshwater Institute in Shepherdstown in implementing a comprehensive research program in "Development of Aquacultural Systems for Appalachia", administered by ARS. The goal of this program is to promote the expansion and diversification of the cold water aquaculture industry through the development of high volume, under-utilized water resources common to Appalachia. With guidance from ARS, the Freshwater Institute is presently developing a new 5-year proposal to design and install a scaled-up intensive production facility for trout and other salmonids, employing state-of-the-art technology for water reuse, that will be evaluated for commercial use.

2. ARS will continue to conduct an aquaculture research program at its Appalachian Fruit Research Laboratory in Kearneysville. The focus of this program is to determine the feasibility of using fish wastes from intensive aquaculture production systems as a nutrient source for fruits produced hydroponically in greenhouses. This is a promising approach to managing aquaculture wastes, maintaining water quality, and diversifying agriculture in West Virginia and Appalachia. ARS is conducting

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this program in cooperation with the Freshwater Institute and the Leetown, WV Science Center of the U.S. Department of the Interior.

3. ARS has reached an agreement with the Leetown Science Center (LSC) to contract for the services of a highly qualified LSC fisheries scientist, with considerable aquaculture experience, to serve as an on-site liaison for the design phase of the NCCCWA. This individual will assist ARS in ensuring that the facility design complements the facilities and resources of the LSC and optimizes the opportunities for conducting research and delivering results that best serve the needs of the U.S. in general and West Virginia in particular.

4. ARS will work closely with the University of West Virginia and appropriate state agencies to identify and develop opportunities for collaboration in aquaculture research and delivery of research results.

5. ARS is developing a technical resource group, consisting of aquaculture scientists, representatives of the cool and coldwater aquaculture industry, and key individuals in West Virginia. This group will work closely with ARS to help define a comprehensive research program for the NCCCWA that will best serve the interests of the U.S. aquaculture industry and the state of West Virginia and that will effectively complement related programs within and outside West Virginia.

QUESTIONS SUBMITTED BY SENATOR LEAHY

NATIONAL CHEESE EXCHANGE

I think everyone would agree that dairy farmers, regardless of the region, deserve a fair, accurate, and representative price for milk. I am deeply concerned that the cheese exchange fails to meet those important criteria. Strong evidence shows that the cheese exchange may have been manipulated by large corporate traders to the detriment of farmers across the country. As you know, Senator Jeffords and I recently sent you a letter explaining our view of the cheese exchange and its role in determining the Basic Formula Price. I think an alternative pricing mechanism which deserves strong consideration is a national electronic survey, operated by the Department.

Question. I would like to know whether you think a national electronic survey of dairy prices could provide a more accurate estimate than the current system of using the cheese exchange?

Answer. In response to concerns about the accuracy of cheese prices reported by the National Cheese Exchange, I have directed the National Agricultural Statistics Service to develop a weekly cheddar cheese price survey. With the support of the industry, this weekly survey will provide a timely reliable national cheese price. Plans include the combination of reporting through electronic mail, facsimile, and telephone to expedite data collection.

On January 29, 1997, the Department announced it was taking steps to address concerns raised about how milk prices are calculated and is seeking comments on whether there exists a superior alternative to NCE prices for administering Federal milk marketing orders. If improved price setting arrangements are identified, the Department will not wait for the Milk Marketing Order reform deadline of April 1999 to implement them.

Question. Do you believe such a survey would require additional funding?

Answer. Although conducting the weekly price survey of cheddar cheese prices is a new activity for the National Agricultural Statistics Service, they will perform this activity within available funds.

CONSERVATION RESERVE PROGRAM

Question. I appreciate the efforts the Department has made in carrying out our intent to refocus the Conservation Reserve Program to enroll the most environmentally-sensitive lands as contracts begin to expire later this year. As part of this effort, I understand you are going to enroll cropped wetlands and adjacent upland buffers, as well as upland buffers around non-cropped wetlands in the CRP. Departmental guidance indicates that these adjacent upland buffers may be up to six times the size of the wetlands around which they are established. Has the Department developed technical criteria for establishing these buffers to ensure that only the lands needed to buffer the wetland from adjacent land use are enrolled and to establish manageable contracts?

Answer. Guidance has been issued by the Natural Resources Conservation Service to its field units to ensure that buffer areas are limited to that which is needed (copy attached). Additionally, NRCS is undertaking a coordinated oversight effort to determine the extent to which the buffer area decisions and other technical CRP de-

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cisions being made in the field are consistent with national guidance and to determine where it may be necessary to issue additional instructions.

Question. What efforts are you making to ensure that accepting wetlands and associated buffers into the CRP will not result in direct competition with enrollment in the Wetlands Reserve Program, potentially driving up the cost of both programs?

Answer. The Department does not believe there is a competition problem. The purpose of expanding CRP land eligibility to include cropped wetlands and their adjacent lands is to restore and protect wetland functions and values to achieve substantial wildlife habitat, water quality, erosion control, and flood control benefits without competing with existing programs like WRP. The maximum enrollment level under each program and the duration and extent of conservation protection are notably different which could result in each program having a separate landowner constituency. If there is a cost increase, it may be in the form of higher WRP per acre easement payment costs as the WRP program begins to enroll a higher percentage of PC's in lieu of cropped wetlands. Generally, the PC's would be expected to have a somewhat higher land value than would the cropped wetlands.

WETLANDS RESERVE PROGRAM

Question. We restructured the Wetlands Reserve Program in the 1996 Farm Bill such that the Department would enroll, to the extent practicable, one-third of the acres in permanent easements, one-third of the acres in temporary easements, one-third in voluntary cooperative agreements. Have you experienced interest among landowners in all three enrollment types to meet the 1/3-1/3-1/3 enrollment goals?

Answer. Under the 1997 continuous sign-up, we have received applications for all three of the program components. Landowners have thus far offered approximately 144,000 acres for permanent easements, 96,000 acres for 30-year easements, and 13,000 acres for restoration cost-share agreements. We anticipate that landowner offers will continue throughout the year in the same relative proportion that has occurred during the first five months of the year. By the end of September, total offers will likely be at least double that which has already been received. This extensive backlog list of ranked offers will serve as the basis for the initial allocation under the 1998 program.

Question. Is splitting the enrollment equally among these three options practicable? If not, do you have an alternative ratio that would be more reasonable to achieve?

Answer. The 1/3-1/3-1/3 split is not the best manner in which the program could be implemented. Based on the landowner response to date it is apparent that permanent easements are the most popular and are being severely underfunded. The 30-year easements, while less popular than the permanent easements, still have enough landowner interest to make it practicable for the Department to reach the goal established in the 1996 Act. The restoration cost-share agreements appear to be far less popular than will be needed for the Department to be able to reach the goal established in the 1996 Act. This may become even more problematic once the CRP cropped wetlands enrollment begins to take full effect. For the Department to be able to enroll the most cost efficient and most ecologically sound wetland restoration projects in response to landowner offers, a ratio of 45 percent permanent, 40 percent 30-year, and 15 percent restoration cost share agreement would be more practicable. We do continue to support having all three options as components of the WRP.

MITIGATION EXEMPTIONS

Question. An underlying theme of the Wetland Conservation provisions in the 1996 Farm Bill was increasing mitigation flexibility options to the producer, while maintaining existing wetland functions and values on the landscape. How is USDA implementing these provisions to ensure wetlands functions and values are in fact being maintained?

Answer. In order to successfully implement the wetland mitigation exemption provision of the 1996 Farm Bill, it is necessary to conduct functional assessments of the wetlands to determine the impact of the conversion activities in order to replace the functions that are lost. Interagency (NRCS, USACE, FWS, EPA) workshops are scheduled this spring to provide guidance to the states on developing an Interim Wetland Functional Assessment Method based on the philosophy of the Hydrogeomorphic Approach to the Functional Assessment of Wetlands (HGM approach). The objective of the workshops is to train partners in the development of a functional assessment method that has the potential to be used by all agencies involved in wetland programs. Thus, providing a science-based process for making mitigation decisions which is developed and supported by these agencies.

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When a wetland mitigation exemption is granted by NRCS, the landowner is required to place an easement on the mitigation site. NRCS documents the information regarding the functions and values lost on the converted site and the functions and values replaced on the mitigation site, based upon the output from a functional assessment evaluation. It is the responsibility of NRCS to ensure that the proposed mitigation plan is viable. NRCS will conduct follow-up inspections of the mitigation sites until all practices are successfully established, including successful establishment of vegetation and restoration of hydrological features as planned.

CONSERVATION RESERVE PROGRAM

Question. As you know, I and many other Northeastern Senators played an important role in making sure CRP was reauthorized. That represents a huge federal financial contribution. Obviously, one reason we could do so was our belief that CRP could help address water quality and other environmental problems in our regions. In the last generation of CRP, the region from Virginia north enrolled only 300,000 acres. In Vermont, only 193 acres were enrolled. Most experts believe that a critical reason was the rate structure. CRP pays prevailing agricultural rental rates. And, in much of the Northeast, even the speculative possibility of development has a strong influence on fair market value. Second, in much of our region, the rental market is influenced by residential landowners who rent farmland out at cheap rates, essentially to make sure the land is cared for. And it seems to me that CRP is not paying fair market value. The proof is that we have extremely limited enrollments in my region.

The market is showing us the rates as they are now set are not at fair market value, or farmers would be enrolling their land. So my question is—what is the Department going to do about this?

Answer. Rental rates have been developed to reflect the dryland agricultural market value cash rents, or cash equivalent of a share rent, for each cropped soil in each county through two general steps. In the first step, NRCS and FSA national offices developed a soil productivity index for each unique soil type based on existing soil characteristics data from soil surveys. In the second step, these draft soil rental rates were distributed to each State and County FSA and NRCS office, who worked with other agencies to review and analyze, and if necessary, adjust the rates to ensure that they reflected prevailing market rents.

The State and county FSA committee in Vermont, along with other local representatives with knowledge of agricultural rental rates, developed dryland cash rental rates, adjusted for soil productivity, for each soil. The State and county FSA committees, with NRCS concurrence, determined that the rates needed no further adjustments. The CRP rental rate accurately reflects the local prevailing agricultural rental rates in their State.

Along with the use of an environmental benefits index, adoption of the new soil-specific market-based maximum acceptable rental rates has had a positive effect on CRP enrollment in the northeastern U.S. (including Virginia). As a proportion of total CRP enrollment, the northeast's share nearly doubled from about 0.7 percent of the 33.9 million acres that were enrolled before 1990; to about 1.3 percent of the 3.1 million acres that were enrolled after 1990.

Question. The Department clearly has authority to be creative on this issue, the Food Security Act (paragraph 1234(c)(1), states: "In determining the amount of annual rental payments to be paid to owners and operators for . . . (CRP), the Secretary may consider, among other things, the amount necessary to encourage owners or operators . . . to participate in the program . . ."

In other words, you may consider what rates will actually encourage enrollments. Further, section 1231(f)(4) states, that in conservation priority watersheds: the Secretary shall attempt to maximize water quality and habitat benefits . . . by promoting significant level of enrollment . . . by whatever means the Secretary determines appropriate and consistent with no additional measures are necessary to promote a "significant level of enrollment." But in the Northeastern priority areas, such as Lake Champlain, additional incentives would seem to be necessary to promote "significant level of enrollment."

What type of incentives could the Department use to address this concern and have you done it in other areas of the country?

Answer. CCC currently provides incentives to encourage enrollment of certain high priority environmental practices such as filter strips and riparian buffer areas. The incentives provide an annual increase of 10 percent to 20 percent over the site specific soil rental rate for the CRP offer. The incentives are used to encourage the implementation of these high priority practices. Any producer in any region of the

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country is eligible to receive an incentive payment if they install certain continuous signup practices such as riparian buffer areas.

Question. My region has a number of water bodies of high public concern that are threatened by pollution. Obvious examples include Lake Champlain, Long Island Sound, and the Chesapeake Bay. In many of these areas, farmers, environmentalists and State officials have come together to develop a comprehensive plan to improve water quality, but they sorely need financial support. I have heard about new use of the CRP provision that allows you to approve State-submitted Conservation Reserve Enhancement Programs which would allow States to submit comprehensive plans to tailor CRP to local needs with an additional contribution of State funds. This seems to demonstrate an important way to show the public that CRP can make a real difference for dealing with pollution problems and that incentive-based approaches can solve a specific problem. I know that several states are awaiting the Department's reaction to plans submitted by Maryland and Illinois.

What is the Department's attitude toward them? Do you have a schedule for approving these plans?

Answer. The Department supports the development of partnerships with States to address critical resource needs of State and National importance using applicable and appropriate provisions of CRP. State Government, working with CCC, is requested to develop a comprehensive plan that outlines: (1) the resource issues to be addressed; (2), the expected societal benefits to be achieved by the program; (3), the State and local contributions; and (4) the role of CRP to address resource issues. Currently, negotiations are under way between USDA and State agencies in both Maryland and Minnesota to develop and finalize Conservation Reserve Enhancement Programs.

Question. Have you set a date when other States would be invited to submit proposals?

Answer. States may submit requests for a State Enhancement Program at any time. The final rule published in the Federal Register included language regarding the availability of the Conservation Reserve Enhancement Program, and training has been provided to all FSA and NRCS State personnel.

A number of Senators have raised concerns over the Department's decision to expand the amount of eligible land for enrollment in CRP as the bulk of existing CRP contracts expire. I have long been a champion of the Program and believe that under the new rule the Agriculture Department will have the opportunity to move this Program forward to maximize environmental benefits and to help American farmers conserve the resources of their land. How the Department applies the Environmental Benefits Index (EBI) to select land for enrollment will be critical to ensuring that CRP funds are used most appropriately. I am concerned about several factors in the EBI and how they will be used in the 15th sign-up.

First, I am concerned about the cost factor in the EBI. Land with very high environmental benefits but relatively high cost should not be disadvantaged by the index. At the same time, it is very important that within a state or region, the cost factor in EBI be used to maximize competition to ensure the most cost-effective program possible.

Question. Will the cost factor be used primarily to encourage competition within regions? Or will it be used to give priority to enrollments in low-cost land areas rather than to the most competitive bids within a given area?

Answer. The Environmental Benefit Index (EBI) is the sum of 6 environmental factors plus cost. The EBI is designed to rank lands for enrollment into CRP that will maximize environmental benefits relative to cost. In order to effectively achieve that goal, each CRP offer is evaluated relative to every other offer in the country. An offer with a lower point score on the 6 environmental indices but a lower rental rate may not be more competitive than an offer that has a higher score on the 6 environmental factors and a high cost per acre. EBI is evaluated based on the total score of environmental factors and cost.

Second, I am concerned that during the 15th sign-up and a possible fall sign-up the Department will be flooded with applications from expiring contract holders. In this situation, it is possible to enroll a great deal of land that has a lower EBI in the next two sign-ups than land that may be available for enrollment in future years.

Question. Will the USDA implement a "floor" for an EBI rating when it is selecting the land for enrollment in future sign-ups?

Answer. After signup, CCC will thoroughly review all offers to ensure that land accepted into CRP provides significant environmental benefits relative to cost. CCC will use actual CRP bid data to evaluate the relative environmental benefits for each offer. Bids that do not provide significant environmental benefits relative to

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cost will not be enrolled in the program. USDA will announce the minimum EBI value at the same time it notifies producers of bid acceptance.

Third, it appears that any cropland near any water body or within any impaired watershed will receive the maximum number of points. The concern I have heard expressed is if these points are too easy to achieve, the effect could be enrollment of many whole fields even though partial field practice enrollment would be adequate to meet whatever water quality concerns do exist.

Question. How will the Department determine how much land should be enrolled to meet a specific water quality objective?

Answer. The EBI is composed of six environmental factors (soil erosion, water quality, wildlife habitat, long-term retention beyond the contract period, air quality, and conservation priority area). Rather than focus on an individual factor, the EBI was constructed to maximize the environmental benefits of all factors related to cost. Also, any area offered for CRP will likely contribute multiple environmental benefits making it difficult to target individual factors.

The determination of how much land to enroll during the 15th sign-up is limited by the authorized program level of 36.4 million acres. It is impossible to determine, though, the amount of land that will be accepted until after the end of sign-up when all offers are evaluated.

Question. Within the water quality scoring system, will maximum points be given to rare and native habitat and critical areas?

Answer. High priority water quality areas can be designated to receive an additional 30 points under the water quality factor of the EBI if the use of CRP will assist in achieving the desired water quality and habitat protection objectives in a cost-effective manner. The critical area may contain areas of rare and native habitat which may be designated by the State technical committee and approved by the State FSA Committee.

Question. Fourth, will the EBI be applied nationally or regionally?

Answer. The EBI will be applied nationally. Every offer will be compared against every other offer. Each offer will be ranked and evaluated and only those offers that provide significant environmental benefits relative to cost, will be eligible to enroll in CRP. In order to achieve the goal of maximizing environmental benefits relative to cost, each offer must be compared to every other offer.

Question. For instance, if a parcel of land in one region of the country ranks high in comparison to parcels in its region, but less favorably in comparison to parcels in other regions, how will the Department evaluate its EBI rating?

Answer. The Department will utilize the actual CRP bid data and other data sources to evaluate the impacts of the EBI. Utilizing the bid data, the Department will evaluate the impacts that EBI could have on land selection for enrollment into the program and the environmental and program impacts. This data will be available when determining the weight for the cost component of the EBI.

Question. Fifth, in the three categories being considered in the EBI (water quality, wildlife habitat and soil erosion) will there be a minimum threshold in each category for land to be enrolled? For example, if an application ranks very low in soil erosion and water quality but very high in wildlife habitat, could it be enrolled in the CRP only for its wildlife benefits?

Answer. There will be no decision on a minimum EBI threshold until after the CRP offer data is evaluated. The overall score of all factors is used to develop the EBI score. It is this score that is used to rank an offer. An offer that ranks low on one factor (water quality) but high on the other environmental factors could be enrolled into the program. Applicants have opportunities to increase their score by planting better wildlife cover or reducing their bid amount.

To be eligible for enrollment, crop land must have a cropping history, be physically and legally capable of being cropped in a normal manner and meet one of the following conditions:

- Have an Erosion Index (EI) of 8 or higher or be considered highly erodible land according to the conservation compliance provisions; (Redefined fields must have an EI of 8 or higher)
- Be considered a cropped wetland;
- Be devoted to any of a number of highly beneficial environmental practices, such as filter strips, riparian buffers, grass waterways, shelter belts, wellhead protection area, and other similar practices;
- Be subject to scour erosion;
- Be located in a national or state CRP conservation priority area; or
- Be cropland associated with or surrounding non-cropped wetlands.

Question. Finally, assuming the Department's goal is to sign-up 36.4 million acres, will the Department reserve a set amount of acres as a "future land bank" for acre-

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age to be enrolled under continuous sign-up in order to provide the necessary flexibility to conserve land with high environmental benefits in the future?

Answer. The Department will reserve acreage for continuous sign-up and for State Enhancement Programs.

CONSERVATION FARM OPTION

Question. The new farm bill creates a Conservation Farm Option which provides for ten-year contracts with farmers utilizing a combination of land retirement, incentive and cost-share payments to foster long-term, innovative conservation improvements. This program holds great promise for encouraging total resource management planning, alternative farming systems and practices, innovative combinations of land management improvements and partial field land retirements. It is my understanding that the program in its first year of implementation will go out as a request for proposals without the need for formal rulemaking. What is the current status of the request for proposals?

Answer. The Conservation Farm Option (CFO) request for proposals for fiscal year 1997 is undergoing final review prior to issuance in the Federal Register.

Question. When will it be issued and when will the proposals be due?

Answer. The CFO request for proposals is expected to be published in the Federal Register by March 31, 1997 subject to approval by OMB. Proposals will be due on or about May 15, 1997.

Question. Will there be appropriate program information and technical assistance for groups and individual farmers who may wish to apply for funds?

Answer. Yes. Appropriate CFO program information will be published in the Federal register and technical assistance will be available at the field level for groups and individual farmers who wish to apply.

GREEN MOUNTAIN NATIONAL FOREST

Question. In the Fiscal Year 1997 Omnibus Appropriations Act, Congress authorized a land exchange between the Green Mountain National Forest (GMNF) and Sugarbush Resort Holdings, Inc. and allowed the proceeds of that exchange to be retained by GMNF for purchase of other lands to be added to the Forest in the future. The land exchange would have considerable benefits for the GMNF and the public. The GMNF would be able to acquire lands that are more consistent with the goals of the management of the GMNF and would provide far greater environmental benefits than the parcel GMNF would offer to Sugarbush. In addition, Sugarbush would acquire a 57-acre parking lot from the Forest Service and be able to provide better skier access and facilities from Sugarbush Village. The GMNF staff have done an exemplary job in negotiating and preparing this exchange. At this point in time, all the details of the exchange have been resolved except one—Departmental approval of the exchange. Although the appropriations language was drafted and interpreted to allow the exchange, one technical question remained involving the establishment of an escrow account. It is my understanding that this question is being resolved to the satisfaction of the USDA Office of the General Counsel. I appreciate the cooperation and hard work on behalf of both agencies to resolve this issue. Unfortunately, due to the short construction period in Vermont approval of the exchange is needed in the immediate future. I am confident that your staff will be able to move this exchange forward with great efficiency. When can I expect the Forest Service to indicate to the GMNF that the land exchange is approved?

Answer. The Green Mountain National Forest is moving forward with the exchange as directed in the legislation. The Forest Supervisor is prepared to issue a decision on the exchange soon and we anticipate the first portion of the exchange will be processed by May 1 of this year.

ELECTRONIC BENEFIT TRANSFER—FOOD STAMPS

Question. I have favored eliminating the use of paper food stamp coupons and switching over to an electronic benefit transfer system for some time. It has been estimated that program losses caused by diversion of benefits and fraud could be reduced by as much as 80 percent under a national EBT system. USDA spends millions each year just on printing and distributing coupons that are used once. Would you support the mandatory elimination of paper food stamp coupons? How is the Department supporting the adoption of the EBT system in the fiscal year 1998 Budget?

Answer. The welfare reform legislation enacted last August does, in effect, mandate the elimination of coupons insofar as it requires full implementation of EBT by the year 2002. Other provisions of that legislation serve to promote timely imple-

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mentation of EBT, including the exemption of EBT systems from Regulation E requirements.

Currently, EBT is operational in 18 States—Statewide in 8 of these States—and in various stages of planning and implementation in the remaining States.

The 1998 Budget supports EBT implementation via sharing the cost 50:50 with the States, under the standard food stamp administrative cost share formula. In addition, \$4.6 million is earmarked for EBT implementation, less than in prior years reflecting a reduced need for implementation funding at this stage.

EBT will eventually supplant the cost of the paper food stamp system—the printing, distribution, and redemption activities—these costs will all disappear. In their place, the program will incur greatly reduced costs for card issuance and electronic redemption. Another advantage, as you point out, is that EBT will help detect and deter trafficking and some ineligible items purchases. EBT provides an audit trail making it possible to identify both stores and recipients that are abusing the program, and to do so at a fraction of the cost of traditional, labor intensive investigatory activity—which were in many cases, prohibitively expensive. In fact, EBT has already helped identify existing fraud—and EBT was at first being blamed for causing it, rather than getting credit for detecting it. Nonetheless, EBT will significantly improve program integrity. Until further advances are made, however, trafficking and ineligible items abuses are still possible with EBT, they are just harder to do without detection.

RURAL DEVELOPMENT INITIATIVES

Question. The 1996 Farm Bill included authorization for a one hundred million dollar Fund for Rural America. I strongly supported the establishment of the Fund as a much needed resource for the Department to support rural development initiatives and research that fall between the cracks of existing programs. Too often strict regulatory requirements of narrowly targeted Departmental programs disqualify innovative projects that could more effectively address the needs of rural communities.

I was therefore disappointed by the Department's decision to depend almost all of the rural development allocation on backlogs within existing rural development programs. I agree completely with the need to augment fiscal year 1997 funding for rural housing programs to offset the interest rate assumptions in the bill which would have dramatically reduced the loan program level. I am also a strong supporter of the Department's distance learning and water and sewer programs. However, within the approximately \$53.8 million direct to rural development initiatives, I had hoped to see some commitment to flexible and innovative approaches to problems facing rural America.

Do you support using the flexibility provided by the Fund for Rural America to fund initiatives which do not fit within the framework of existing Department programs, but which might more effectively address the problems facing rural communities?

Answer. I certainly support more flexible approaches to the problems of rural America. This is why the Administration strongly supported the Rural Community Advancement Program (RCAP) which contains that flexibility. Unfortunately, implementation of RCAP was blocked by the 1997 Appropriations Act.

The statutes providing for the Fund for Rural America requires the moneys specifically for rural development be used through existing programs. We are therefore limited to a certain extent by existing statutory and regulatory requirements. Additionally, it was the opinion of many Members of Congress that the funds be used to address the backlog of applications so prevalent in many of our programs and the Appropriations Act Conference Report encouraged the Department to use the funds to address the shortfall in program funding caused by the difference in interest rates. Therefore, I directed the funds be utilized to meet the most pressing needs. As you are aware, I also directed that a portion of the funds, \$2.2 million, be used for value-added cooperative development efforts and I expect some innovative proposals to come forth from this process. We will be announcing the availability of these funds in the near future and inviting applications. I also believe we will see some innovative proposals from the research component of the Fund for Rural America.

Question. I was also disappointed by the lack of communication between the Department and Congress regarding the disposition of the Fund. As an author of the bill which established the Fund I had hoped to discuss ideas about the Congressional intent behind the program. Unfortunately that opportunity was not available until the division of the Fund was finalized.

How do you intend to improve communications between members of this Committee and the Department to allow input from interested members and to ensure that

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detail about how the Fund for Rural America will be used are available to members well before their publication in the Federal Register?

Answer. A significant number of the Members of Congress did contact my office to express their thoughts on how the Fund for Rural America should be utilized. Those ideas, as well as the thoughts of a number of others from outside the Department, were considered in the deliberations on how best to use the funds.

RURAL FIRE TASK FORCE

Question. I would like to thank you for the unflagging support you have shown for the AmericaCorps program. The initiatives that the Department has funded in Vermont have improved nutrition services to children and the elderly, improved trails and recreation in the Green Mountain national Forest and reduced fire insurance costs for the hundreds of homeowners touched by the rural Fire Task Force.

While the AmericaCorps direct grant program has ended, the initiatives the Department helped to establish have not. I have written to you asking for your assistance in helping those organizations which wish to continue make the transition from direct Federal assistance. The Rural Fire Task Force in particular has shown tremendous return in reductions of fire insurance costs for a minimal investment of Federal dollars.

Are there existing Department of Agriculture programs the Rural Fire Task Force could apply to, or funding available within the Department to ensure that this valuable initiative will continue despite the loss of the AmeriCorps direct grant program?

Answer. There are three components to the forest service cooperative fire programs including rural fire prevention and control (through the Interior Appropriations Committee), the rural development community fire protection grant funds are passed through to the Forest Service which in turn funds applications from the State Foresters, and the Federal excess property programs through the Defense Department. In addition, there is the rural development community facilities loan program which finances a significant number of fire protection projects. I would suggest the Rural Fire Task Force contact the State Forester and the Rural Development State Director in Vermont and inquire as to the availability of funds for fiscal year 1997.

EMPOWERMENT ZONE/ENTERPRISE COMMUNITIES

Question. In 1994 when the first round of rural and urban Empowerment Zone and Enterprise Communities (EZ/ECs) were chosen, I was surprised to discover that no Vermont communities were eligible for consideration as rural Enterprise Communities. This despite the fact that Vermont is the most rural State in the country based on the 1990 Census. While Vermont does not have the high poverty levels and unemployment rates the current EZ/EC criteria require, it faces other hurdles such as higher cost of living, high fuel and heating costs and high costs for construction of housing and utilities. When take in combination with the common rural problems of a small tax base and small, widely separated communities it is clear that Vermont and other northern states have a need for rural EZ/ECs as the southern states that this designation has largely been restricted to.

The Administration requested funding in its fiscal year 1997 and fiscal year 1998 proposed budgets for another round of Enterprise Communities. I believe that any new round of rural Enterprise Communities should take into consideration a broader spectrum of economic indicators to ensure that struggling rural communities in all parts of the country are eligible to compete.

Question. What are the specific criteria for consideration as a rural Enterprise Community? How are those criteria scored?

Answer. The criteria in the legislation proposing a second round of designations is again based on the degree of poverty. Each census tract in the area seeking designation must have a poverty rate of not less than 20 percent with at least 90 percent of the census tracts having poverty rates of not less than 25 percent. The only exception provided for is that the Secretary of Agriculture may designate not more than one EZ and not more than 5 EC's that satisfy emigration criteria developed by the Secretary.

I certainly agree that there are rural areas experiencing economic problems that are not associated with poverty or unemployment and that the Federal government needs the flexibility necessary to address those problems. However, the reasoning behind the EZ/EC legislation is that traditional approaches to solving these problems have not worked well in poverty stricken communities and a comprehensive, well-focused effort is needed to build the economic infrastructure necessary to re-

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verse the situation. This approach is being proven successful by the initial round of rural designations.

Question. Are the criteria and scoring for the selection of EZ/EC's set by law or by Departmental regulation?

Answer. The criteria for designation as an EZ/EC are established in statute. The criteria for rating and scoring the applications will be established in regulation.

Question. What steps would be required to modify selection criteria for rural EZ/EC's?

Answer. Members of Congress will have ample opportunity to review and modify the legislation as it considered by Congress. Subsequent regulations will also be available for public comment.

Question. Would you support expanding the criteria for rural EZ/ECs to address the problems facing rural communities in northern states?

Answer. I would be happy to discuss possible solutions to the problems facing rural communities in the northern states with you.

QUESTIONS SUBMITTED BY SENATOR FAIRCLOTH

TOBACCO RESEARCH

Question. What has been the result of this language on ARS and CSREES research efforts for the production, processing or marketing of tobacco or tobacco products?

Answer. ARS terminated its research program on the production, processing, or marketing of tobacco or tobacco products, and no CSREES funds have been approved for these purposes. Tobacco research is still conducted at the State Agricultural Experiment Stations supported by state or industry funds.

Question. Are there any USDA funds expended for the production, processing or marketing of tobacco products?

Answer. There are no ARS funds expended for research on the production, processing, or marketing of tobacco products. CSREES no longer approves Federally-supported research projects directly dealing with tobacco production and processing. There are however, some funded projects using tobacco as a model system for basic genetic and physiological studies. Research dealing with the health effects of tobacco use is still permitted.

Question. Has the Department analyzed what the impact of this language has been on tobacco farmers and tobacco-producing States? I wish to see any documentation that the Department can provide on this matter.

Answer. Neither ARS or CSREES has collected information to analyze the impact of research restriction on tobacco farmers and tobacco-producing states.

Question. Is it your understanding that this language prohibits any ARS or CSREES employee at the state level from doing research on anything to do with tobacco?

Answer. ARS and CSREES employees are not specifically prohibited from doing research on anything to do with tobacco. In some instances, research must be performed on plants that are amenable to specific kinds of manipulations in experiments. Tobacco plants often serve this purpose, and they are widely used for basic research in plant molecular biology. Tobacco plants can be regarded as the "white rat" of the plant sciences. Although the objectives of these experiments are not specifically related to production, processing, or marketing of tobacco, all crops benefit from the advances of knowledge and direct applications that might develop from sound basic science.

Question. Is it your understanding that this language would prohibit any ARS or CSREES employee at the state level from doing research on alternative uses of tobacco?

Answer. Research on certain alternative uses of tobacco might be permissible if the research objectives are to improve production systems for other crops, rather than for the production and processing of the tobacco crop itself. For example, ARS has in the past conducted research to identify unique insecticidal compounds from tobacco and closely related plants, and to learn how to use those natural compounds for pest control as part of integrated pest management for cotton and other crops.

Question. Does this language affect any other tobacco program that falls under the Tobacco Division of USDA?

Answer. There are no other tobacco-related programs in ARS or CSREES.

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QUESTIONS SUBMITTED BY SENATOR COVERDELL

KARNAL BUNT

Question. How much money do you anticipate will be spent by the Animal and Plant Health Inspection Service (APHIS) this year and next to enforce any quarantines imposed to prevent the spread of Karnal Bunt (Kb)?

Answer. In fiscal year 1997, we anticipate spending approximately \$5.6 million on regulatory activities to enforce Karnal Bunt (Kb) quarantines. Our costs are decreasing as we develop efficiencies in our quarantine enforcement methods. The budget requests an increase of \$4.5 million for pest detection activities in fiscal year 1998 largely for Karnal Bunt regulatory activities, the National Survey, and to examine alternative control and eradication measures for Karnal bunt and potential future infestations.

Question. Do you believe implementing a quarantine in the Southeast is necessary, in light of the fact you have not found any bunted kernels?

Answer. We will not take regulatory action in the Southeast unless proof exists that Karnal Bunt is present. We are examining wheat lots for bunted kernels and conducting pathogenicity tests with spores recovered from the Southeast to determine whether there is the presence of the disease.

Question. In the United States Department of Agriculture's 1998 Budget Summary, there is a request by the Animal and Plant Health Inspection Service (APHIS) of \$9 million for pest detection activities, a \$5 million increase from fiscal year 1997. The stated reason for this large increase is to enable APHIS to provide assurance to all trade partners that Karnal Bunt is not present in major wheat-producing areas of the United States. How can you provide such an assurance if Karnal Bunt has been detected from coast to coast?

Answer. Since March 1996, we have committed \$65 million for program operations and compensation to producers. With survey data, we can clearly demonstrate where the disease is and is not. And, it has not been detected coast to coast. Because of this, we have largely maintained market access for U.S. wheat from non-infected areas. To date, negotiations have been successful with several significant markets, including Germany and Italy.

Question. Which States will this increased money be spent?

Answer. We will spend this increased money in the 42 wheat-producing States for conducting the National Survey and in the Karnal Bunt regulated areas which are currently limited to the Southwest.

Question. It is my understanding that Karnal Bunt is a disease which can not be eradicated. Do you believe that Karnal Bunt can be eradicated?

Answer. As a regulatory agency, APHIS considers eradication a reasonable first objective in dealing with a new quarantine pest. When Karnal Bunt was first detected in March 1996, this position was strongly supported by various industry groups, State departments of agriculture, and officials involved in international trade. Presently, the main goals of the program are to (1) protect U.S. export markets, (2) protect U.S. wheat producers in Karnal Bunt-free areas, (3) provide the best possible option for producers in regulated areas, and (4) maintain the best possible information on where Karnal Bunt is located.

Question. If yes, please explain how? If no, how much will it cost to continuously implement a quarantine on a disease that can not be eradicated?

Answer. The management strategy we are currently using against Karnal Bunt concentrates on minimizing the probability that it will expand beyond areas where it currently exists and detecting and identifying it in other areas to which it might have inadvertently been moved. We expect that this strategy will be sufficient to allow wheat exports to continue moving.

With a program like Karnal Bunt, where the negative consequences that affect exports is so great, we feel that regular investment in enforcement activities are justifiable since these activities would play a crucial role in protecting export markets. During fiscal year 1997, we plan to spend approximately \$5.6 million on enforcement activities and to conduct the National Survey. Our costs are decreasing as we develop efficiencies in our quarantine enforcement methods.

Question. Do you believe Karnal Bunt is a major disease threat?

Answer. While there is no human or animal health problem associated with this plant disease, it is considered a pest of quarantine significance by more than 30 nations with which the U.S. does business. In the next few months, APHIS will be addressing this issue at an international forum in an attempt to create a better understanding of this disease within the international agricultural community.

Question. If APHIS found Karnal Bunt spores or Karnal Bunt in the Midwest, would that change your opinion?

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Answer. Well, if Karnal Bunt spores were found in the Midwest, we would have a much more serious problem with the export market. As a result, we would have to change our program strategy since we would no longer meet our goals of protecting U.S. export markets or of protecting U.S. wheat producers in Karnal Bunt-free areas.

Currently, exports are not significantly affected. Only three percent of U.S. wheat is located in Arizona. We are able to certify wheat for export by demonstrating that over 90 percent of U.S. wheat originates in areas where Karnal Bunt is not known to be present and we have seen relatively normal movements of wheat exports since the beginning of our program.

Question. Since a quarantine was imposed in the Southwest, what have the economic losses been for farmers?

Answer. For the 1996 crops, we estimated the losses for compensation to be \$39 million.

Question. It is my understanding that you plan on compensating farmers affected by any quarantine imposed to prevent the spread of Karnal Bunt. How much do you anticipate this will cost?

Answer. For the 1997 crops, we estimate the losses to be significantly reduced because of the actions which were already taken in the regulated areas and the knowledge gained from the National Survey. At this time, we estimate the losses at no more than \$10 million.

Question. Who will be eligible?

Answer. If regulations are necessary for the 1997 crop, compensation will be provided to producers and handlers of regulated wheat, and owners of grain storage facilities which require decontamination.

Question. Is this included in your budget request for fiscal year 1998?

Answer. At this time, we have no way of projecting whether additional Karnal Bunt areas will be identified for the 1998 crop. The increase of \$4.5 million included in the fiscal year 1998 Budget for pest detection is primarily for Karnal Bunt regulatory activities and to conduct the National Survey.

Question. Are there plans by you or the Administration to work with other nations to have the status of Karnal Bunt changed from a major to minor disease threat?

Answer. We have initiated plans for an international conference this summer to consider whether the status of Karnal Bunt should be changed. By that time, APHIS will have the results from pathogenicity tests performed on spore samples from the southeastern United States. We will be asking Mexico and Canada to sponsor the conference, possibly through the auspices of the North American Plant Pathology Organization (KNOOP). Hopefully, this conference will provide all countries the opportunity to review the available data and create rational and objective standards for the international movement of grains affected by various smut diseases. The suggested conference title is, "The International Conference on Regulatory Issues Related to Smut in Small Grains in the United States".

Question. If Karnal Bunt is found in the Midwest, would your answer change?

Answer. No, it would not.

Question. What increased costs do you anticipate for farmers if there is a quarantine imposed in the Southeast?

Answer. If regulations are necessary, we have estimated the additional needs for compensation to be \$6.4 million.

Question. How will this affect peanuts, vialia onions, cotton, and other major crops in the Southeast?

Answer. Field-packed nuts and vegetables that meet normal industry standards for cleanliness are not considered to be contaminated. If we find a bunted kernel in a field that is double-cropped, we would place restrictions only on soil movement. The term "soil" generally refers to large clumps or clods; dust or road film is not considered to be soil. Cotton harvesting would not be affected.

Question. What will be the economic losses for farmers in the Southeast?

Answer. If regulations are necessary, our estimate of the losses to be compensated is about \$6.4 million.

Question. Does the U.S. Department of Agriculture regulate suspect spores?

Answer. No regulatory action will be taken until clear evidence exists that the disease is present.

Question. What is the reliability of the spore identification techniques and can your current DNA test differentiate between Karnal Bunt spores and spores from fungi present on weedy and cultivated grasses found in the Southeast?

Answer. APHIS' test procedures provide a reasonable assurance that spore counts of one or more in a 50-gram sample, from a railcar or elevator, will be detected. Spore counts which average less than one per 50 grams may not be detected. APHIS policy accepts the negligible risk of spread of the disease posed by such spore counts.

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Current DNA testing does not distinguish between Kb spores and ryegrass spores. The pathogenicity tests underway are designed to determine if the ryegrass pathogen infects wheat. And, we are developing other tests to distinguish the two pathogens based on physical and chemical properties.

SUBCOMMITTEE RECESS

Senator COCHRAN. The next hearing of this subcommittee will be on Tuesday, March 4, at 10 a.m. in this room, 124, of the Dirksen Senate Office Building. We will hear at that time from the Department's witnesses on the budget request regarding food safety, marketing, and regulatory programs. Until then, the subcommittee stands in recess.

[Whereupon, at 12:35 p.m., Thursday, February 27, the subcommittee was recessed, to reconvene at 10:08 a.m., Tuesday, March 4.]

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AGRICULTURE, RURAL DEVELOPMENT, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1998

TUESDAY, MARCH 4, 1997

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:08 a.m., in room SD-124, Dirksen Senate Office Building, Hon. Thad Cochran (chairman) presiding.
Present: Senators Cochran, Burns, and Bumpers.

DEPARTMENT OF AGRICULTURE

**STATEMENT OF MICHAEL DUNN, ASSISTANT SECRETARY, MARKETING
AND REGULATORY PROGRAMS**

**ACCOMPANIED BY DENNIS KAPLAN, DEPUTY DIRECTOR, OFFICE OF
BUDGET AND PROGRAM ANALYSIS**

ANIMAL AND PLANT HEALTH INSPECTION SERVICE

STATEMENT OF TERRY MEDLEY, ADMINISTRATOR

AGRICULTURAL MARKETING SERVICE

STATEMENT OF LON HATAMIYA, ADMINISTRATOR

GRAIN INSPECTION, PACKERS AND STOCKYARDS ADMINISTRATION

STATEMENT OF JAMES R. BAKER, ADMINISTRATOR

FOOD SAFETY AND INSPECTION SERVICE

STATEMENT OF THOMAS J. BILLY, ADMINISTRATOR

ACCOMPANIED BY DR. CRAIG REED

OPENING REMARKS

Senator COCHRAN. The subcommittee will please come to order.

This morning we are very happy to welcome our panel of witnesses to discuss the proposed budget for the Department of Agriculture as it relates to the Food Safety and Inspection Service; the Animal and Plant Health Inspection Service; the Agricultural Marketing Service; and the Grain Inspection, Packers and Stockyards Administration.

We are happy to have with us Assistant Secretary for Marketing and Regulatory Programs Michael Dunn. We welcome you and your colleagues, the Administrators of these programs which I men-

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tioned. We also welcome Mr. Kaplan from the Budget Office of the Department of Agriculture.

Mr. Secretary, we have copies of your statements and we will make them all a part of the record. But before proceeding any further, I'm going to see if my colleagues have any opening comments or statements they would like to make.

Senator Burns.

STATEMENT OF SENATOR BURNS

Senator BURNS. Thank you, Mr. Chairman. I have just a couple of comments, but I think it would be better if my statement just be entered in the record.

I still have some concerns about Mr. Billy and some of the concerns we have on the border of meat inspections coming in from Canada. I would hope that we could maybe lay aside some fears that we have in the State of Montana.

Anytime we start talking about food inspection and food safety, we know that part of the problem in the Northwest with the Jack-in-the-Box situation was not created by American producers.

I am concerned about how we are moving more to a fee situation with our inspection service. Food safety is everybody's problem, and we know who will pay the fees for inspection. It will be the producer. That will be one of the expenses that has to be incurred by a processing plant whenever they start buying and paying for the raw product. They will take it off of the purchase price. I said this the last time. Anybody that does not believe that we in agriculture do not live at the end of the railroad where we buy retail and sell wholesale and we pay the freight both ways and all the fees that are incurred has never experienced being raised on 160 acres of two rocks and one dirt like I have been.

So, we understand those.

Mr. Baker, I see you today and I want to congratulate you on what you have done in your Department. I think you have brought a lot of credibility. And P&S, maybe it ain't working as smooth as we would like to see it in some places, but I think you have done a great job there and I want to commend you for that.

Other than that, I would just put my statement in the record, Mr. Chairman, and thank you for holding this hearing.

PREPARED STATEMENTS

Senator COCHRAN. Thank you, Senator Burns.

Senator BUMPERS. Mr. Chairman, I have a statement I'll put in the record.

Senator COCHRAN. Without objection, the statements will be made a part of the record.

[The statements follow:]

PREPARED STATEMENT OF SENATOR BURNS

Thank you, Mr. Chairman.

I would like to welcome the Assistant Secretary and the Agency Administrators to the committee hearing today. In an attempt to get the input we all seek I will try to keep my statement as short as possible. This should provide us with the time we need to hear testimony from these people and learn more about the budget proposal put forth by the Department of Agriculture and the Administration.

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I would like to address my issues as they appear to us in the list of witnesses appearing before the committee today. With this I will start with the Administrator of the Food Safety and Inspection Service.

Mr. Billy, I must say coming from a state with little or no poultry production, and from a state that shares a border with our neighbors to the north, that I cannot see the workings of a partnership between Congress and the Food Safety and Inspection Service. I can also see that, with the most recent lawsuit filed by the state of Ohio against the Federal government that this partnership does not seem to be working as well as you are describing here today. I also have to say that the co-operation does not seem to be as clear to the producers and consumers in the field. I will commend you and your agency for going out into the field to get an understanding of what those packing houses of a smaller size are facing, but I do not believe that you have alleviated all the fears that these people have about staying in business.

As with the general Department budget, I am concerned about the number of employees that you are taking out of the field. It appears to me that we continue to reduce those jobs in the field that mean most to our smaller communities and provide the real work in this government.

I also have fears about the changes that are being proposed in regulatory form. I agree with you that the basic goal of FSIS should be the improvement of the safety of our food sources. But the clear, sharp and precise fact we see, is that if somebody gets ill from food borne pathogens, then it is always related to our own American products. Not the meat and vegetables we see coming in from other countries. Our producers in Montana, Mississippi, Missouri, Washington, Arkansas and Wisconsin take the hit in the public eye.

Mr. Billy, I hope that in your position you can and will continue to work to form the partnerships that you have mentioned in your testimony today. With this partnership comes much work and even heartbreaks at times, but it is what the people in America seek from government, and it is my hope that you can work out the many particulars which are required in this close working relationship.

Mr. Chairman I would also like to welcome Assistant Secretary Mike Dunn and the Administrators of the Animal Plant Health Inspection Service, Agricultural Marketing Service and the Grain Inspection Packers and Stockyards Administration to this hearing. These are all good people I am willing to put my faith in as they work for the future of American agriculture.

It wasn't even a week ago that I met with the Assistant Secretary and the APHIS Administrator along with Secretary Glickman to discuss a very important issue in Montana, Bison. I was pleased to see how far the Department of Agriculture has come in the past two years, but still am disappointed in the current state of the Yellowstone bison herd. I appreciate the way you came to the table with some suggestions which I hope the Secretary of the Interior will open his mind too in the coming months.

There are a few issues of concern I have with the budget proposal coming out of Marketing and Regulatory Programs. First among these in my state is the issue of the reduced funding in the Animal Damage Control budget. I understand that according to your testimony Mr. Secretary that you feel that this is in response to the wishes of Congress. Well I can guarantee you that this is not among the wishes of this member of Congress. Approximately two years ago, Secretary Babbitt found it necessary to introduce a predator into Yellowstone National Park, the Canadian wolf. With this action he placed a predator on the ground that preys upon the livestock in Montana. This is bad enough, for the controls are rigid in defending one's property. But add to this the increased numbers of coyotes in western states and you have a serious problem.

The problem we face is that due to the wolf ADC, is unable to do the work necessary to provide protection for the livestock producers in Montana. The real problem will be down the road however, because without ADC workers and control, the people will begin to take the law and the necessary steps for protection into their own hands. The results of this of course will be the criminal prosecution for a number of people only trying to protect what is theirs.

When we talk about the needs on the ground today, one of the main areas of interest that all of us in the west share, is the need for effective work in the area of packers and stockyards. As we have seen in the past two years, this has been a high point of interest with all members of Congress in the west. We have discussed and we have bargained and we have read the reports, but the basic premise which is on the ground is that the packers are taking advantage of the producer. Now this is not something that is new, it goes on in all commodities and with all manners of livestock, but the fact is the people have a lack of confidence in the government to do something. I have the utmost faith and confidence in the Adminis-

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trator of the agency, but he really needs the help of the Department and this Congress to do an effective job.

I do not have the answer in my hip pocket to the problems we face in this area, but I do know we do need to work with Mr. Baker to see that he can and does get the most bang for the dollar. I look forward to sitting down with him in the near future to discuss many of the concerns we share with the current system, and what Congress can do to assist him.

Finally, I have real problems with the inclusion of the large numbers and the amounts sought to be generated by the user fees in this budget. I do not think that this is the really fair approach to the funding needs of this Department. I believe the Administration and the Department is falling into the same mind set as the majority of our country is, that they see the Ag budget and figure it all goes to the farmers and ranchers. Well we see numerous dollars, over half of the Ag budget I believe, going to programs of a social nature. Food Stamps, and WIC are among these. I do not want to see the poor and the needy in our land suffer any more than anyone at this table, but let's be honest when we are dealing with the taxpayer's funds.

The imposition of the user fees is just another tax on the people in rural America, and they are not in a much better position to afford than many of the people that live in our cities. These people toil day in and day out for the tax dollars they put into the treasury of this land, and now we are asking them to pay more for services that they really feel that they have paid for with their original tax payment.

I know in Montana we don't have the great need for mass transit that we find here on the east coast and in our nation's capital. But we do have the need for the services provided by APHIS, AMS and GIPSA. These are what we like to think we pay our tax dollars for. Now this Administration and the Department have made a move, which I believe we have fought in the past, to pass additional costs onto our producers. As I mentioned to Secretary Glickman last Thursday before this committee, these costs are not going to be borne by the consumer, they are reflected directly in the price which is paid to the producer for the food and fiber they provide this country. At this time I do not know where I will make up the difference, but I will work hard to protect my agricultural producers in Montana and throughout this country against this tax plan by the Administration.

Mr. Chairman, I really wanted to keep this short and sweet and to the point, but agriculture is still the number one industry in Montana and I need to make my feelings known on a variety of topics which this hearing allows me to address. I am sure I will need to address many of these again down the road, but I need to make my intentions known. I thank you, Mr. Chairman for the time, and I look forward to hearing from the panel today.

PREPARED STATEMENT OF SENATOR BUMPERS

I wish to join Senator Cochran in welcoming our guests from the U.S. Department of Agriculture who appear before us this morning. Agencies of the Department of Agriculture have jurisdiction over a vast array of services and obligations. However, within the purview of all those agencies there may be no others that hold the high level of responsibility for protecting the continued health and safety of agriculture and the ultimate consumer of all that agriculture may produce than those collected here today.

We all recall from history, nearly 100 years ago, how President Theodore Roosevelt having just completed reading Sinclair Lewis' *The Jungle*, tossed his breakfast out the window when placed before him. Reminded of and revolted by the imagery of Lewis' masterpiece, wound too much in fact for comfort, President Roosevelt reportedly stormed from the room to begin work toward passage of legislation that led to the creation of the Food Safety and Inspection Service. Whether it is to the writing skills of Lewis or the ill-served breakfast of a President, we all owe a great deal of gratitude.

As much as we think we know about how to protect our crops and livestock from pests and disease, truth is we live in a very dynamic world where new threats to agricultural stability appear to be in a constant state of introduction to our shores. Problems we never thought we might see, such as Karnal Bunt, and hopefully never will see, such as Bovine Spongiform Encephalopathy (Mad Cow Disease), remind us we must be ever vigil in the protection of our productive capabilities and consumer confidence in those products. In some cases, introduction of serious pests, such as the Imported Fire Ant or the Zebra Mussel, are inadvertent. Still, that does not reduce our responsibilities in removing these threats from the public domain.

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Aside from pathogens, insects, diseases, and other adversaries of nature, we must also guard against the unwise use of chemicals as methods of control. Pesticides have helped American Agriculture produce bountiful and hardy foods and certainly rank among those items we regard as the arsenal of the agricultural revolution. These products remain important for continued production and we are learning more about proper means of application. We must continue to learn more about how to ensure our food is safe from all forms of harm.

American agriculture is as dynamic as the forces of life itself. New forms and presentation of products, such as organics, cater to the ever changing demands of the public. Growth and changes in the livestock sector remind us to ensure that the benefits of growth accrue to all. A safe and healthy agriculture, and a safe and healthy world of consumers can feel secure that there are those at USDA charged with the duty to see that these dynamic forces remain positive.

The budget before us presents certain challenges. We are here to discuss the range of priorities, areas in which attention should decline or increase, and the manner in which some of these services should be paid. In some cases, we might even need to find agreement on who the actual beneficiary may be. But regardless of the points of detail, I believe we can all agree that the work before us is serious and touches on levels of safety no one here is willing to reduce even slightly.

STATEMENT OF MICHAEL DUNN

Senator COCHRAN. Mr. Secretary, why don't you proceed and make whatever comments or statements that you think would be helpful for the committee.

Mr. DUNN. Thank you, Mr. Chairman. I thank you and members of the committee. I am pleased to appear before you today to discuss the activities of marketing and regulatory programs at the U.S. Department of Agriculture for fiscal year 1998.

I have a written statement and would like that to be made part of the record.

Senator COCHRAN. Without objection, it is so ordered.

Mr. DUNN. With me today are Terry Medley, Administrator for the Animal and Plant Health Inspection Service; Lon Hatamiya, Administrator for the Agricultural Marketing Service; and James Baker, Administrator for the Grain Inspection, Packers and Stockyards Administration. They have written statements for the record and will answer questions regarding the specific proposals.

The Marketing and Regulatory Program activities are funded by both the taxpayers and beneficiaries of program services. The programs are proposed to carry out \$789 million of activities. Over \$396 million of that will be funded through fees from beneficiaries of these services. Currently over 58 percent of the Department's user fee programs are administered by marketing and regulatory programs. These programs have been marketed, tested, and are high performers under the Government Performance and Results Act.

The fiscal year 1998 budget on the discretionary side, we request a current law appropriation of \$431 million for APHIS, \$51 million for the Agricultural Marketing Service, and \$25.7 million for the Grain Inspection, Packers and Stockyards Administration.

Legislation will be submitted to cover \$28 million more in user fees. The budget proposes new fees to recover the cost of administering programs in all three of the agencies.

APHIS provides leadership in anticipating and responding to issues involving animal and plant health, conflicts with wildlife, environmental stewardship, and animal well-being.

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The APHIS 1998 budget request proposes under current law \$424 million for salaries and expenses compared to fiscal year 1997 appropriations of \$435 million.

The budget request contains an increase of \$1.3 million for the Agricultural Quarantine Inspection Program to handle the increased workload along the Mexican and Canadian borders and from Hawaii and Puerto Rico.

Approximately \$9 million are requested for increased pest detection activities and will be largely devoted toward the Karnal bunt program.

The budget proposes a decrease of \$3.3 million for animal damage control.

APHIS will conduct architectural and engineering work with carryover money funded by the screwworm program for a sterile screwworm rearing facility to be built in Panama. Legislation will be proposed to cover the costs of providing activities for animal welfare, veterinary biologics, pink bollworm, biotechnology, and the swine health protection program. We believe that the identifiable beneficiaries of these Federal programs, rather than the general taxpayer, should pay for the services they receive.

An appropriation of \$3.2 million is proposed to complement the Agricultural Research Service's request for modernization of the Plum Island Animal Disease Center and \$4.0 million for basic facility repairs, alterations and preventive maintenance.

Agricultural Marketing Service's fundamental mission is to facilitate the strategic marketing of agricultural products in domestic and international markets while ensuring fair trade practices and promoting a competitive and efficient marketplace to benefit consumers of U.S. food and fiber products.

In response to the changing needs of its customers, the AMS has improved program delivery and broadened the focus of programs to incorporate a global approach to marketing services. The Market News reports are nearly 700 reports on a daily basis available on the Internet.

In response to recommendations made by the Advisory Committee on Agricultural Concentration, AMS broadened the scope of market news to include more information about cattle traded under contract or formula, value-based pricing, and regional market forces. These actions have given our farmers and ranchers more tools to compete in today's marketplace which relies on timely and accurate market information.

AMS's budget request under current law for fiscal year 1998 is \$49.8 million for the Marketing Service Program and \$1.2 million for the Federal-State Marketing Improvement Program. We are requesting an increase of \$320,000 to begin marketing news collection in South and Central America and the Pacific rim. Market surveys conducted by AMS for these areas are needed as international competitions increase in the post-GATT and NAFTA economy.

We are also requesting an increase of \$500,000 to expand domestic market news reporting in accordance with recommendations made by the Secretary's Advisory Committee on Agricultural Concentration.

We are working diligently to publish a rule on the national organic standards and to implement a national program. In order to

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meet the increased responsibility for accrediting organic certifiers and administering the program, the AMS budget includes an increase of \$505,000. Consistent with the National Organic Standards Act, we will seek to recover the cost of the program through user fees that will be deposited into the Treasury.

The budget also proposes to return program funding for the Pesticide Data Program to AMS from the Environmental Protection Agency. With the implementation of the Food Quality Protection Act, the pesticide residue data will play a critical role in conducting risk assessments of re-registration of pesticides.

Finally I want to discuss GIPSA. Its mission is to facilitate the marketing of livestock, poultry, meat, cereals, oilseeds, and related agricultural products, and to promote fair and competitive trading practices for the overall benefit of consumers in American agriculture.

Federal grain personnel work with over 2,000 State and private inspectors to provide highly qualified inspection and weighing services on a user-fee basis. In 1996 this unique mix of Federal, State, and private inspection agencies provided 2.3 million inspections on an estimated 250 million metric tons of grains and oilseeds, issued 118,000 official weight certificates, and weighed over 114 million metric tons of grain, and met with trade teams representing 41 countries around the world.

GIPSA's Packers and Stockyards is located in 11 offices throughout the United States to monitor compliance with the Packers and Stockyards Act with approximately \$95 billion of livestock, meat, and poultry products.

During fiscal year 1996, GIPSA targeted resources at providing financial protection, promoting fair business action, and enabling a competitive marketing environment for livestock, meat, and poultry.

GIPSA's 1998 budget request under current law is \$68.8 million, of which \$25.7 million represents appropriated funds. The remaining \$43.1 million represents user fee authority for grain inspectors and weighing services.

The fiscal year 1998 budget proposes legislation to authorize, subject to appropriations, the collection of \$3.6 million in additional user fees to cover the costs of grain standardization activities. The grain industry is the primary beneficiary of the grain standards and should pay for these services.

For P&S programs, the budget proposes \$14.8 million which includes increases of \$225,000 to allow GIPSA to establish electronic filing procedures for annual reports, \$1.6 million for activities in the packer competition and industry structure areas, and \$750,000 for poultry compliance activities.

Increasing concentration, structural change, declining market performance, and the increased use of complex formula and value-based marketing systems by packers continue to raise questions of regulatory and policy significance. Additional resources will allow GIPSA to expand its monitoring and investigations regarding the anticompetitive implications of structural change and behavioral practices in the meat packing industry and will afford us an increased capability to support legal actions that require complex economic and statistical analyses.

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Finally, the fiscal year 1998 budget proposes legislation to authorize the collection of license fees to administer the activities under the P&S Act. All meatpackers, live poultry dealers, stockyard owners, market agencies, and dealers, as defined in the P&S Act, would be subject to license fees.

Also included is a legislative proposal regarding a statutory dealer trust to require livestock inventories and accounts receivable due from sales of livestock to be held in trust for unpaid cash sellers when a dealer fails to pay for livestock.

I appreciate the opportunity to present the budget for marketing and regulatory programs. We believe the proposed funding amounts and sources of funding will provide the level of service wanted by our customers: the agricultural producing and marketing industry, consumers, and the general public. We are happy to answer any questions.

PREPARED STATEMENTS

Senator COCHRAN. Thank you very much, Mr. Secretary. We have your complete statement, and it will be made part of the record along with the statements of Mr. Medley, Mr. Hatamiya, and Mr. Baker.

[The statements follow:]

PREPARED STATEMENT OF MICHAEL DUNN

Mr. Chairman and members of the Committee, I am pleased to appear before you to discuss the activities of the Marketing and Regulatory Programs of the U.S. Department of Agriculture and to present our fiscal year 1998 budget proposals.

With me today are Terry Medley, Administrator of the Animal and Plant Health Inspection Service, Lon Hatamiya, Administrator of the Agricultural Marketing Service, and James Baker, Administrator of the Grain Inspection, Packers and Stockyards Administration. They have statements for the record and will answer questions regarding specific budget proposals.

MARKETING AND REGULATORY PROGRAMS

The mission of the Marketing and Regulatory Programs is to facilitate the domestic and international marketing of U.S. agricultural products and to ensure the health and care of animals and plants while improving market competitiveness and the economy for the overall benefit of both consumers and American agriculture. We contribute to all four fundamental themes underpinning the Department's budget proposals for 1998. We have activities to: expand agricultural economic and trade opportunities; ensure a healthy, safe, affordable food supply; manage our natural resources in a sensible way; and, reinvent government and save taxpayers money.

The Marketing and Regulatory Program activities are funded by both the taxpayers and beneficiaries of program services. The programs are proposed to carry-out \$789 million of activity. Over \$396 million will be funded through user fees from beneficiaries of these services. Currently, over 58 percent of the Department's user fee programs are administered by the Marketing and Regulatory Programs. These programs have been market tested and should be high performers under the Government Performance and Results Act.

Fiscal Year 1998 Budget

On the discretionary side, we are requesting a current law appropriation of \$431.7 million for the Animal and Plant Health Inspection Service; \$51.0 million for the Agricultural Marketing Service; and \$25.7 million for the Grain Inspection, Packers and Stockyards Administration. Legislation will be submitted to recover \$28 million more in user fees. The budget proposes new license fees to recover the cost of administering the Packers and Stockyards Act (P&S Act), additional fees for selected APHIS activities, and for developing grain standards. In addition, on the mandatory side, nearly \$11 million in user fees would be collected to finance the Federal oversight of marketing agreements and orders. I will use the remainder of my time to

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highlight the Department's budget requests for the Marketing and Regulatory Programs.

ANIMAL AND PLANT HEALTH INSPECTION SERVICE

APHIS provides leadership in anticipating and responding to issues involving animal and plant health, conflicts with wildlife, environmental stewardship, and animal well-being. With its customers and stakeholders, APHIS promotes the health of animal and plant resources by facilitating their movement in the global marketplace. These efforts help ensure abundant agricultural products and services for U.S. consumers, and expand export markets for our farmers.

The responsibilities of APHIS have grown as agricultural markets have embraced the challenges and opportunities of global trade. Protection of U.S. agriculture was previously accomplished by excluding imports from countries which might have foreign pests and diseases. The development of new "rules" of trade through GATT, NAFTA, and other agreements now must address sanitary and phytosanitary barriers based upon risk assessment procedures, regionalization and equivalence. Ensuring access to foreign markets has become more complicated and is a critical component of protecting U.S. agriculture. For example, the dynamic biology and epidemiology of animal and plant pests and diseases such as Karnal bunt, vesicular stomatitis, and fruit flies, all represent risks to U.S. agriculture's productivity and access to foreign markets. But, these risks can be ameliorated with adequate prevention, monitoring systems and response actions. APHIS is ready to meet the opportunity and challenge to develop new partnerships with States, industry, and the public.

APHIS Priorities

Protecting American producers from harmful pests and diseases.—APHIS has inspectors at international ports of entry—including land border ports, airports, and seaports—around the clock. Last fiscal year, they conducted over 77 million inspections and intercepted approximately 1.9 million illegal agricultural products. Seizures of contraband prevented the introduction of nearly 56,000 plant pests that could have been dangerous to U.S. agriculture and more than 290,000 lots of unauthorized meat and animal byproducts that could have had the potential to spread health threats. If there were outbreaks of foot-and-mouth disease, exotic Newcastle disease, or hog cholera, they could have had an overwhelmingly negative impact on the \$186 billion in annual cash receipts from agricultural products.

One of the most visible and successful port of entry inspection efforts is the Beagle Brigade program. Inspectors use specially trained beagles at 20 international airports to detect prohibited fruits, plants, and meat. The beagles identified 73,751 instances of illegal contraband in 1996 and can detect agricultural contraband about 90 percent of the time.

Facilitating trade.—With survey data, we are able to demonstrate where diseases exist and where it does not exist. Because of these data, we have maintained nearly 99 percent of the \$6 billion wheat export market. Most countries have continued to accept our export certificates and we have met with others to negotiate their acceptance of wheat from regulated areas that test negative for Karnal bunt. We have negotiated successfully with several significant markets, including Germany and Italy.

One of the many new markets we have helped open has been pork to Russia. Since 1993, producers have shipped more than \$30 million worth of pork, making Russia a valuable market for U.S. farmers. We have also opened new export markets in both China and Japan for U.S. apples. Industry officials have estimated these markets will mean hundreds of millions of dollars of income for U.S. farmers.

Behind the scenes, we help farmers maintain access to international markets by providing foreign governments with up-to-date scientific information on the status of U.S. plant and animal health. For instance, we have worked to keep the Korean market for cowhide at more than \$700 million—making it the largest agricultural export to Korea. In addition, we negotiated the sanitary requirements with Russian officials that allowed the resumption of U.S. poultry exports to Russia. Through these successful efforts, we maintained access to Russia's \$500 to \$700 million market for U.S. poultry.

We also certify U.S. agricultural products for export to ensure that our trading partner's plant and animal health requirements are being met. In fiscal year 1996, about 279,000 Federal certificates were issued for plant products alone and another 527,000 ruminants and horses were certified for shipment to foreign destinations. We issue these certificates on demand—including evenings, weekends, and holidays—on a user-fee basis. These fees help us reduce the Federal Government's costs to taxpayers by charging the cost of providing these services to the direct beneficiary.

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APHIS has proposed a rule setting up the regionalization framework. Under regionalization, countries would recognize pest and disease status on an area or regional—rather than national—basis. A region's risk-class levels—ranging from “negligible risk” to “very high or unknown risk”—would depend on the region's geographic location; environmental conditions; prevalence of diseases; type of commodity; country's animal health infrastructure with regard to its disease monitoring, surveillance systems, and its level of enforcement to contain diseases and pests. Canada has already made the commitment to regionalization by accepting parts of the United States as free of bluetongue disease. The European Community is considering doing the same. We hope to move forward with regionalization and join these countries on this new frontier of agricultural trade.

Monitoring animal and plant health.—Our National Animal Health Monitoring System—or NAHMS program—surveys the Nation's livestock and poultry herds to systematically establish a baseline measure of U.S. livestock and poultry health. By sampling animals at slaughter, we are advancing our surveillance goals to detect, isolate, and eradicate diseases like brucellosis and tuberculosis. As you know, we have been taking actions to prevent the introduction of Bovine Spongiform Encephalopathy (BSE) since the late 1980's.

For plant pests, APHIS and cooperators in the Cooperative Agricultural Pest Survey (CAPS) conduct detection surveys for incipient infestations of exotic pests. These data provide Federal and State officials, and the private sector, with information used to manage cooperative pest control programs. APHIS used the CAPS network to implement the National Survey for Karnal bunt and the emergency response after the detection of the pathogen that causes the disease in Arizona in March 1996. The data gathered through these pest surveys enabled the Agency to continue certifying wheat for export subsequent to the 1996 detection.

The Internet enables us to quickly and efficiently reach our customers. For example, a sheep producer in North Dakota can use the information superhighway to access our interactive database and get information regarding the voluntary scrapie certification program. A poultry producer in Georgia can visit the APHIS home-page to review regulations, search for emergency bulletins, and find current export health requirements. And, a cattle rancher in New Mexico or a dairy herd owner in Ohio can locate information about national trends collected by our National Animal Health Monitoring System.

Our scientists at the National Veterinary Services Laboratories in Ames, Iowa, strive to identify and improve the diagnostic kits and procedures used to test livestock and poultry. One such advance included a more accurate method of distinguishing the hog cholera virus from a similar virus that causes bovine viral diarrhea. Another involved molecular techniques to distinguish pathogenic from non-pathogenic strains of avian influenza (AI). Scientists used this latter test two years ago in California to confirm a potentially deadly strain of AI in shipment of birds. That shipment was denied entry and we prevented millions of dollars of potential losses.

Last August, exotic Newcastle disease was detected in the United States at a pet bird facility in Missouri. An early response team worked with State officials and traced the incident to smuggled birds. Through quarantines and testing they eliminated the risk to our commercial poultry industry.

Reducing the impact of existing pests and diseases on U.S. agriculture.—The Animal Damage Control (ADC) program minimizes the effects of wildlife on livestock and crops and protects human health and safety from wildlife damage. Recent surveys indicate that predators have killed 96,200 calves and 21,200 adult cattle valued at \$39.5 million annually. Coyotes and dogs continued to be the largest predators of cattle. Bird and other wildlife strikes are a serious economic and safety problem for aircraft in the United States. The National Wildlife Research Center, working with the Federal Aviation Administration (FAA), found that 2,220 strikes to civilian aircraft mostly by gulls and waterfowl occurred in 1994. Losses from strikes to U.S. military aircraft are estimated to average \$112 million per year; a similar loss occurs for civilian aircraft. ADC provided assistance to 340 airports regarding appropriate control programs to minimize wildlife hazards in 1996.

We have reached a major milestone in the Cooperative State-Federal Brucellosis Rapid Completion Plan by bringing the total number of quarantined herds in the United States down to a record low of 32 as of December 31, 1996. This tremendous achievement points towards eliminating this disease by the end of fiscal year 1998. Significant progress is being made also toward the final eradication of bovine tuberculosis. Currently, 44 states are accredited free, and six States are in a modified accredited status. One of our proudest achievements in the eradication program has been the significant decrease in the number of Mexican-origin cattle identified with tuberculosis at slaughter. APHIS has the infrastructure, statutory authorities, and

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operational and technical expertise for managing a wide range of pest and disease activities which include grasshopper, noxious weeds, boll weevil, biocontrol, and pink bollworm.

Being the Federal leader of animal care and horse protection.—Many citizens have recently expressed concern about the care and handling of wildlife in captivity; particularly those used for exhibition in zoos and circuses. We have developed regulatory proposals regarding the treatment and training requirements for elephants and other dangerous exotic animals. In looking for ways to improve our enforcement efforts, we seek cooperation with our partners to carry out our regulatory responsibilities effectively. For example, APHIS recently signed a Memorandum of Understanding with the State of Missouri to share information on Animal Welfare Act (AWA) inspections. We are also continuing to pursue augmentation of our AWA enforcement authority. For instance, we are looking at ways of increasing our authority to refuse licenses to individuals not in compliance with the AWA—or anyone convicted of violating any Federal, State, or local animal welfare law. In our efforts to improve enforcement of the Horse Protection Act (HPA), APHIS officials depend on individuals certified through the Designated Qualified Persons (DQP) program to assist in monitoring horse shows for compliance.

Developing new or improved methods based on science.—The National Wildlife Research Center has made significant progress toward developing immunocontraceptive vaccines for non-lethal wildlife damage management. In the biotechnology field, after extensive review to assure minimal risk, APHIS deregulated seven new plant varieties. They are: herbicide tolerant cotton; male sterile and herbicide tolerant corn; tomato altered for fruit ripening; Colorado potato beetle resistant potato; virus resistant squash; herbicide tolerant soybean; and virus resistant papaya. These new technologies are important advances for agriculture.

The international harmonization of regulations for genetically modified products involve several activities. First, we work with other countries, including all European countries, to build confidence in the review processes and work to extend existing regulatory approaches for traditional plant products to new, genetically modified products. Second, we work with other countries to coordinate our different national regulatory approaches through bilateral and multilateral forums, such as the Organization for Economic Cooperation and Development. Third, we attempt to base our review system on rational, science-based regulations. The recent trade agreements support this regulatory approach.

APHIS' 1998 Budget Request

The current law request proposes \$424 million for salaries and expenses, compared to the fiscal year 1997 appropriation of \$435 million. The budget request contains an increase of \$1.3 million for the Agricultural Quarantine Inspection Program (AQI) appropriated program that inspects travelers along the Mexican and Canadian borders and from Hawaii and Puerto Rico to the mainland. The 1998 budget requests approximately \$9 million for pest detection activities; largely devoted to the Karnal bunt (KB) program. The budget proposes a decrease of \$3.3 million for Animal Damage Control operation by seeking at least 50 percent of total program support from each State. This proposal is responsive to Congressional encouragement that APHIS maximize cost-sharing of ADC control activities. The budget also proposes a decrease of \$9.8 million in the boll weevil program since it is no longer necessary to provide Federal funding in areas where the boll weevil no longer exists. APHIS will still assist in establishing new program areas, oversee and provide technical support to boll weevil detection and control activities in the eradicated and non-infested areas. In addition, APHIS intends to conduct architectural and engineering work for a sterile screwworm rearing facility, to be built in Panama with carryover funding for screwworm. Legislation will be proposed to recover the costs of providing certain costs for animal welfare, veterinary biologics, pink bollworm, biotechnology and the Swine Health protection Act. We believe that the identifiable beneficiaries of these Federal programs, rather than the general taxpayer, should pay for the services they receive.

An appropriation of \$7.2 million is proposed for maintenance and modernization of APHIS facilities in 1998 to complement the Agricultural Research Service's request to continue modernization of the Plum Island Animal Disease Center and for general repairs and maintenance on existing buildings.

AGRICULTURAL MARKETING SERVICE

The fundamental mission of AMS is to facilitate the strategic marketing of agricultural products in domestic and international markets, while ensuring fair-trading practices, and promoting a competitive and efficient marketplace to the benefit of consumers of U.S. food and fiber products. The AMS programs enable the private

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sector marketing system to provide food and other agricultural products more efficiently, with greater dependability, lower economic cost, and higher equitable treatment among the participants. AMS' activities include the dissemination of market information, development of grade standards—many of which are used in the voluntary grading programs funded by user fees—protection of producers from unfair marketing practices, random testing of commodities for pesticide residues, oversight of industry funded programs to promote agricultural products, research and technical assistance aimed at improving efficiency of food marketing and distribution. AMS also administers marketing agreements and orders at the national level and purchases commodities that support domestic feeding programs.

Program Accomplishments and Plans

In response to the changing needs of its customers, AMS has improved program delivery and broadened the focus of its programs to incorporate a global approach to marketing services. Using additional funds provided for fiscal year 1997 for Market News activities, AMS absorbed reporting functions in states, such as California, that were unable to provide the level of coverage necessary to maintain the integrity of national market reporting. Market news coverage for critical California markets was maintained by establishing a new office in Fresno, California, and reporting California livestock, grain, and hay markets utilizing AMS staff located in other states.

The U.S. Department of Agriculture's market news reports are now available on the Internet's World Wide Web. The new Market News Communications System will carry nearly 700 reports on a daily basis. The World Wide Web is just one more step we have taken to increase accessibility to and the timeliness of market news information.

In response to recommendations made by the Advisory Committee on Agricultural Concentration, AMS broadened the scope of market news to include more information about cattle traded under contract or formula, value-based pricing, and regional market forces. These actions have given our farmers and ranchers more tools to compete in today's marketplace, which relies on timely and accurate market information. We are happy to be on the forefront of supplying American agriculture all the information they need in order to strategically produce and successfully market products in a globally competitive marketplace.

As the global marketplace has grown in importance, we have taken initial steps to meet the international information needs of American agriculture. Within limited available funds AMS has developed international market intelligence to support expanded foreign markets. Through cooperative exchanges of information between the United States and countries in Europe, Canada, Mexico, and Asia, AMS provides critical market information, such as current prices and volume traded, to U.S. producers that want to take advantage of these markets. Market news reports containing this information have enabled agricultural exporters to take advantage of expanding global marketing opportunities. In addition, AMS is providing technical assistance aimed at increasing U.S. export opportunities through market development activities focusing on market information, quality assessment, and product distribution systems. These activities are primarily conducted through USDA's Emerging Markets Program by representing U.S. commercial interests in various international standard setting organizations.

Under the Pesticide Recordkeeping Program, AMS is working to achieve national coverage by 1998. Currently, AMS provides funding for educational materials, training programs, and inspection of certified private applicators' records through cooperative agreements with 22 states. In states that are unable to enter into cooperative agreements with AMS, Federal employees administer the program. In addition, the State Cooperative Extension Services and other organizations deliver educational information.

AMS works closely with State programs to enhance marketing of agricultural products. For example, AMS has developed a Partners in Quality, or PIQ program with the States to design a unique system of procedures, documentation, and audits for packing houses. The Federal-State Improvement program improves the efficiency of the agricultural marketing chain through cooperative grant agreements with State Departments of Agriculture and other State agencies. And, the Pesticide Data program is a cooperative Federal/State effort to obtain statistically defensible data on pesticide residues in food.

AMS' 1998 Budget Request

For 1998, we are requesting a budget of \$49.8 million for the Marketing Service Program and \$1.2 million for the Federal-State Marketing Improvement Program. We are requesting an increase of \$320,000 to expand international market news re-

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porting to South and Central America, and Pacific Rim countries. Market surveys conducted by AMS have indicated a great demand for this information by the food and fiber industry as they meet increased competition in the post-GATT and NAFTA economy.

We are also requesting an increase of \$500,000 to expand domestic market news reporting in accordance with the recommendations of the Secretary's Advisory Committee on Agricultural Concentration. As I mentioned earlier, initial steps have been taken within available funds to address some of the concerns raised by the Committee. However, more needs to be done including 1) increased reporting on the terms of cattle traded under contract sales; 2) expanded reporting on value-based pricing indicators; 3) establishment of more timely and detailed reports of import and export data on livestock and meat; and, 4) reporting the distribution of slaughter cattle by grade and yield on a regional basis. We must adapt to the changing needs of the industry in order to ensure a healthy competitive environment for all players.

We are working diligently to publish a draft rule on the National Organic Standards by late spring and to implement a National program. The program will facilitate the marketing of agricultural products as organically produced both domestically and internationally. AMS plans to begin accrediting state agricultural departments and private persons who will inspect participating producers and handlers to certify compliance with the organic program after the final rule is published in late 1997. AMS estimates that when the program is implemented approximately 35 private agencies will certify over 6,800 organic producers and handlers. In order to meet the increased responsibility for accrediting organic certifiers and administering the program, the AMS budget includes an increase of \$505,000. Consistent with the National Organic Standards Act, we will seek to recover the cost of the program through user fees that will be deposited into the Treasury.

The budget also proposes to return program funding for the Pesticide Data Program to AMS from the Environmental Protection Agency (EPA). The Administration believes that funding for the Pesticide Data Program within AMS is preferable to funding the program within EPA. PDP uses state-of-the-art equipment that can detect residues in parts per billion. We find detectable residues in less than 46 to 62 percent of the test samples. Residues, which are less than 10 percent of the tolerance levels set by EPA, occur in 90 percent of the samples. Only 1.3 percent of the samples contain violative residues; 88 percent of which represent pesticides having no tolerance on that particular commodity—often due to long-term uncontrollable carryover effects from DDT. These data help the Department dispel the notion that pesticide residues are pervasive and at dangerous levels. It also helps improve the confidence which domestic and foreign consumers have in the food safety of our products. The Economic Research Service has used this data and published reports to help the Department target its agricultural research and extension resources. These programs implement integrated pest management practices and eliminate mistakes by farmers in applying pesticides, in controlling drift from adjacent fields or in following best management field rotation practices.

AMS has the technical staff and program infrastructure in place to meet the multiple demands for pesticide residue data. Since the program was created, AMS has forged highly successful cooperative working relationships with participating states to obtain statistically defensible data. AMS staff have worked with many others to refine the scientific methodology for collecting and conducting the tests so the data is useful not only to EPA, but also the Food and Drug Administration, USDA's Foreign Agricultural Service, Economic Research Service, Agricultural Research Service, other academia, the agricultural industry, and consumers. With the implementation of the Food Quality Protection Act, the pesticide residue data will play a more critical role for conducting risk assessments for the reregistration of pesticides. The program continuity provided by funding the program in AMS will ensure the integrity of the data and that all the needs of agriculture and the security and safety of the food supply to the public are met.

GRAIN INSPECTION, PACKERS AND STOCKYARDS ADMINISTRATION

The Grain Inspection, Packers and Stockyards Administration's (GIPSA) mission is to facilitate the marketing of livestock, poultry, meat, cereals, oilseeds, and related agricultural products, and to promote fair and competitive trading practices for the overall benefit of consumers and American agriculture. GIPSA personnel are situated in field locations across the country to serve our customers in the grain, livestock and poultry industries.

Organization and Performance

Federal grain personnel work with over 2,000 State and private inspectors to provide high-quality inspection and weighing services on a user-fee basis. Federal in-

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spectors service 42 export elevators located in Georgia, Illinois, Indiana, Louisiana, Maryland, New York, Ohio, Oregon, and Texas. A small Federal staff also provides service at six export elevators in Eastern Canada for U.S. grain transshipped through Canadian ports. Eight delegated States provide services at an additional 20 export elevators located in Alabama, California, Minnesota, Mississippi, South Carolina, Virginia, Washington, and Wisconsin. Sixty-five (65) designated agencies service the domestic market under GIPSA supervision. In 1996, this unique mix of Federal, State, and private inspection agencies provided 2.3 million inspections on an estimated 250 million metric tons of grains and oilseeds; issued over 118,000 official weight certificates; weighed over 114 million metric tons of grain; and met with trade teams representing 41 countries around the world to teach them about GIPSA and the U.S. grain marketing system.

GIPSA's grain program collected over \$34 million to conduct over 2.3 million official inspections, 600,000 protein and oil tests, 115,000 mycotoxin tests, and for a variety of other official inspection and weighing services on U.S. exports of wheat, corn, coarse grains, rice and soybeans. These products were valued at approximately \$27 billion. Our activities cost only a little over one-tenth of 1 percent of the total value of the exports.

In fiscal year 1996, GIPSA's grain program pursued a number of initiatives to re-engineer and automate our business and administrative functions in an attempt to contain costs, lessen risks, and increase the productivity associated with grain handling. We worked closely with the U.S. grain handling industry on Electronic Data Interchange (EDI), an electronic commerce project designed to automate business transactions involving U.S. grain. A reengineered quality assurance and quality control program for the official grain inspection system will improve the quality and accuracy of inspection results nationwide. The new, proactive program integrates automated technology, empowers front-line employees to take action, and increases the use of statistical quality control processes to further improve the performance of the official grain inspection system.

GIPSA continued to be the sole laboratory for grain inspection equipment in the National Type Evaluation Program. This program is a cooperative effort with the National Institute of Standards and Technology and the National Conference on Weights and Measures for standardizing the commercial grain inspection equipment. GIPSA continued numerous grain moisture meter calibration changes to improve the accuracy and consistency of commercial grain moisture measurements.

GIPSA also helped educate our worldwide customers about the quality and value of U.S. grain exports. GIPSA representatives met with 77 teams from 41 countries to provide information, technical guidance, and educational seminars.

GIPSA's Packers and Stockyards Program is located in 11 offices strategically sited throughout the United States to monitor compliance with the P&S Act. The Commerce Department estimates the annual wholesale value of livestock, meat, and poultry products to be approximately \$95 billion. At the close of fiscal year 1996, there were 1,348 stockyards; 6,988 market agencies/dealers; and 2,169 packer buyers registered with GIPSA to engage in the livestock marketing business. There also were approximately 6,000 slaughtering and processing packers; an estimated 6,500 meat distributors, brokers, and dealers; and an estimated 225 poultry firms subject to the P&S Act.

During fiscal year 1996, GIPSA targeted resources at providing financial protection, promoting fair business practices, and enabling a competitive marketing environment for livestock, meat, and poultry. The Agency conducted over 2,000 investigations which disclosed over 800 violations of the P&S Act. Formal actions were requested in 84 cases and 62 administrative or justice complaints were issued to bring firms into compliance with the P&S Act. Administrative decisions and orders were issued in 49 cases during fiscal year 1996. Most violations were corrected voluntarily. Several cases resulted in livestock and poultry producers receiving additional funds for the sale of their product. Financial investigations during fiscal year 1996 resulted in \$3.5 million being restored to custodial accounts established and maintained for the benefit of livestock sellers. Packer and poultry trust activities also returned over \$400,000 to livestock sellers and over \$100,000 to poultry growers during the fiscal year. During fiscal year 1996, 205 insolvent dealers and market agencies corrected or reduced their insolvencies by \$11.2 million. GIPSA closely monitored anticompetitive practices to determine whether there were apportioned territories, price agreements or arrangements not to compete, and payoffs or kickbacks to buyers. A high priority is placed on investigating all complaints and developing information regarding the failure of livestock dealers, market agencies, or packers to compete for the purchase of livestock.

In 1996, a major investigation of fed cattle procurement practices in Kansas was completed. The investigation examined over 15,000 purchase transactions involving

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two million head of cattle and found that supply and demand factors were the primary causes of price declines in the spring of 1995. GIPSA began several other actions to increase enforcement activities in the area of anticompetitive-type practices involving the Nation's major meat packers. A major cattle procurement investigation in Texas will examine over 37,000 purchase transactions involving over six million head of cattle sold during 1995 and 1996. A major slaughter hog procurement investigation will examine approximately 50,000 purchase transactions involving over 2.5 million head of slaughter hogs. Using data from the Kansas and Texas fed cattle investigations, GIPSA will conduct economic analyses during fiscal year 1997 on the effect of forward contracting, packer feeding, and marketing agreement/formula pricing arrangements.

In fiscal year 1997, GIPSA will use a review by USDA's Office of the Inspector General (OIG) to increase its effectiveness and make full use of its authority to investigate and rectify anticompetitive practices and arrangements. GIPSA's structure and operating practices and procedures may need to be modified to enhance its responsiveness to the needs of a changing industry.

GIPSA has solicited public comment on the need for regulations to address contract poultry grower financial arrangements. Many poultry growers have complained about the behavior of some contractors who have been comparing the production costs between growers in determining payment. Growers also have complained about the inaccuracy of feed weights, untimely feed delivery, inconvenient pickup procedures and unacceptable procedures for weighing live birds picked up for slaughter.

Strategic Planning

The draft GIPSA Strategic Plan was developed to guide the agency into the next century and to help ensure that our programs and services remain relevant to our customers and American agriculture. It was developed in a cooperative effort with all GIPSA employees and our customers. The four major goals that will guide our planning processes and initiatives for the upcoming years are to ensure that: programs are cost-effective and responsive to markets served; the credibility of programs is unquestionable; GIPSA employees are highly-skilled professionals providing quality customer service; and, customers' expectations are harmonized with GIPSA's authority and capabilities.

As part of the strategic planning process, GIPSA identified several measures that will allow us to quantitatively evaluate our performance. In the grain program, GIPSA will begin measuring the performance of the new quality assurance and control system for accuracy and consistency; the average cost of oversight per metric ton of grain inspected; the number of new tests developed; the number of improved methods/calibrations implemented; and the average cost of export grain inspection per metric ton. For the P&S programs, GIPSA will implement a new electronic tracking system for complaints and investigations. This system will enable us to establish performance goals based on the new tracking and monitoring system, and to provide for more effective allocation of resources.

GIPSA's 1998 Budget Request

To fund the important initiatives and to enable GIPSA to remain a valuable part of American agriculture, under current law, GIPSA's total budget request for fiscal year 1998 is \$68.8 million, of which \$25.7 million represents appropriations funding. The remaining \$43.1 million represents user fee authority for grain inspection and weighing services.

For fiscal year 1998, the President's budget proposes a total program level for grain inspection of \$54.0 million, with \$10.9 million appropriated for compliance, standardization, and methods development activities. The fiscal year 1998 budget also proposes legislation to authorize, subject to appropriations, the collection of \$3.6 million in additional user fees to cover the costs of grain standardization activities. The grain industry, which is the primary beneficiary of the grain standards, should pay for the services they receive rather than the general taxpayer.

For P&S Programs, the budget proposes \$14.8 million, which includes increases of \$225,000 to allow GIPSA to establish electronic filing procedures for annual reports, which is consistent with the requirements of the Paperwork Reduction Act of 1995; \$1.6 million for activities in the packer competition and industry structure areas; and \$750,000 for poultry compliance activities.

Increasing concentration, structural change, declining market performance, and the increasing use of complex formula and value-based marketing systems by packers continue to raise questions of regulatory and policy significance. Additional resources will allow GIPSA to expand its monitoring and investigations regarding the anti-competitive implications of structural changes and behavioral practices in the

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meat packing industry, and will afford us an increased capability to support legal actions that require complex economic and statistical analyses. Continuous, systematic collection and analysis of data along with aggressive investigative activities are required to address these issues effectively. The needs for these additional resources were supported by recommendations from the Secretary's Advisory Committee on Agricultural Concentration.

Finally, the fiscal year 1998 budget proposes legislation to authorize the collection of license fees to administer all activities under the P&S Act. All meat packers, live poultry dealers, stockyard owners, market agencies, and dealers, as defined in the P&S Act, would be subject to the license fees. Also included is a legislative proposal regarding a statutory dealer trust to require livestock inventories and accounts receivable due from the sale of livestock to be held in trust for unpaid cash sellers when a dealer fails to pay for livestock.

CONCLUSION

I appreciate this opportunity to present the budget for the Marketing and Regulatory Programs. We believe the proposed funding amounts and sources of funding will provide the level of service wanted by our customers—the agricultural producing and marketing industry, consumers, and the general public. We are happy to answer any questions.

PREPARED STATEMENT OF TERRY L. MEDLEY

Mr. Chairman and members of the Committee, I am very pleased to report on the use of resources you have entrusted to us. Using these resources, we help to ensure a wholesome, affordable food supply while stimulating global economies, safeguarding agricultural resources, and protecting ecological systems. I will report on our efforts and outcomes in more detail.

OUR MISSION

APHIS leads the way in anticipating and responding to issues involving animal and plant health, conflicts with wildlife, environmental stewardship, and animal well-being. Together with our customers and stakeholders, we promote the health of animal and plant resources to facilitate their movement in the global marketplace, which helps to ensure abundant agricultural products and services for U.S. consumers and necessary export markets for our farmers.

EXTERNAL AND INTERNAL FACTORS

In developing its overall strategy for accomplishing its mission, APHIS considers a wide range of internal and external factors. The following factors serve as challenges and opportunities for APHIS programs:

1. *The growing importance of global trade to U.S. agriculture and the development of new "rules" of trade through GATT, NAFTA, and other agreements.*—APHIS responsibilities have grown as agricultural markets have become global in nature. We once thought protecting U.S. agriculture meant excluding foreign pests and diseases. New rules concerning sanitary and phytosanitary regulations mean that we must base exclusion decisions upon risk assessment procedures and concern for equivalence. Equivalence of sanitary and phytosanitary regulations among nations is the key to ensuring access to foreign markets and a critical component of protecting U.S. agriculture.

2. *The dynamic biology and epidemiology of animal and plant pests and diseases.*—Threats to plants, domestic animals, and wildlife are dynamic. Pests, such as fruit flies, and diseases, such as stomatitis and karnal bunt, represent risks to U.S. agricultural productivity and access to foreign markets. APHIS is continuously challenged to update prevention strategies, monitoring systems, and response actions needed to ensure effective prevention, control and response.

3. *The need to expand upon and develop new partnerships with States, industry, and the public.*—The role of the Federal government in agriculture continues to change, driven in large part by budgetary constraints and the need for partnerships to carry out new and complex programs. In a cooperative effort, we share responsibility for animal and plant health with the States and industry while public involvement, both directly and through the media, is expanding. APHIS has both the opportunity and the challenge to plan its mission and carry out its implementation strategies through new forms of collaboration and cooperation.

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OUR PRIORITIES

1. *Our first priority is to protect American producers and maintain export markets by preventing the introduction and establishment of pests and diseases harmful to U.S. agriculture.*—APHIS conducts many activities to protect the health of U.S. plant and animal resources: including preclearance inspections, permit decisions, port of entry inspections, quarantine treatments, monitoring and detection surveys, and eradication of exotic plant and animal pests and diseases. While these activities are fundamental to protecting U.S. plant and animal resources, they succeed only when they are part of a comprehensive safeguarding system that reduces pest risk.

Inspecting people and cargo

Our inspectors work at international ports of entry—including land border ports, airports, and seaports—around the clock. Last fiscal year, we conducted over 77 million inspections and intercepted nearly 1.9 million illegal agricultural products. These products harbored over 56,000 plant pests that could have infested U.S. farms and led to billions of dollars in losses and control costs.

Our officials also intercepted more than 290,000 lots of unauthorized meat and animal byproducts that have the potential to spread health threats such as foot-and-mouth disease, exotic Newcastle disease, and hog cholera to American livestock and poultry. These diseases could dramatically reduce the \$186 billion Americans receive annually in cash receipts from agricultural products.

One of the most visible and successful parts of our pest and disease exclusion efforts is the Beagle Brigade program. This program pairs beagles and inspectors at 19 international airports throughout the country to detect prohibited fruits, plants, and meat. Our beagles can detect agricultural contraband about 90 percent of the time. The beagles identified illegal contraband 73,751 times in 1996.

Our Agency takes action against those agricultural diseases and pests that find their way into our country undetected. One example is the pathogen that causes Karnal bunt. Since the pathogen's discovery in Arizona in early March of 1996, we have worked with States and industry to focus on four main objectives. The first is to protect U.S. wheat producers who do not have Karnal bunt; the second is to provide the best possible options for those who are affected by Karnal bunt; the third is to protect the movement of wheat into domestic and international markets. And finally, the fourth is to ensure that we maintain the flow of pertinent disease information to guide our efforts.

We recognized early on that, we would need to determine the actual presence of the disease and limit the paths that enable its spread. We initiated the national Karnal bunt survey and conducted targeted delimiting surveys and traceback efforts to track the movement of suspected grain and seed. We have made every effort to be attentive to the needs of producers—striking a balance between the need to protect those affected, while also keeping U.S. wheat moving in domestic and foreign commerce. Accordingly, as we gathered preharvest survey results, we began to adjust the initial boundaries of regulated areas. We removed areas from quarantine in July. In October, we again refined the regulations, establishing criteria for levels of risk and relieving some restrictions.

As we have said from the very beginning, we intend to keep our efforts to combat this disease flexible and risk-based. We will continue national survey activities as we determine the appropriate long term response to Karnal bunt.

2. *A second priority is to facilitate trade.*—Competitiveness in international trade is of vital national interest to the United States. We seek to maximize trade opportunities and access to new markets by developing new export protocols which assure that exported animals and plants and related products meet the requirements of recipient nations, and by integrating contemporary science into negotiations with trading partners. The establishment of the World Trade Organization has significantly changed the rules of trade and dramatically increased the importance of international standards. By ensuring compliance with international standards and the entry requirements of importing countries, APHIS facilitates the export of U.S. agricultural products, livestock, and poultry. Because APHIS resolves sanitary and phytosanitary issues between states, it is uniquely positioned to align interstate regulations with international standards.

Keeping products flowing to foreign countries

APHIS keeps exports flowing by maintaining existing markets and opening new ones. Let me describe a few examples.

With Karnal bunt disease survey data, we can clearly demonstrate the limited distribution of the disease and we can show other countries that Karnal bunt does not impact the quality of U.S. wheat. Because of this, we maintained 99 percent of the \$6 billion wheat export market. Most countries have continued to accept our ex-

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port certificates and we have met with others to negotiate their acceptance of wheat from regulated areas that tests negative. We have negotiated successfully with several significant markets, including Germany and Italy.

We have opened new export markets in both China and Japan for U.S. apples. These are markets that were not even considered a few years ago. Now, because of our efforts, industry officials have estimated that apple shipments to Japan alone will mean hundreds of millions of dollars of income for U.S. farmers. Several livestock protocols have just been negotiated with China, opening this market to exports of U.S. ruminants, swine, ratites and germ plasm. The negotiations have been long and steady, taking over ten years to get into this current market of over \$10 million for U.S. livestock. China, with its rapidly expanding economy, is considered one of the largest potential markets for U.S. animal-related exports.

We also worked to keep the market for cowhide exports to Korea open and thriving. In recent years, the export of such hides has provided American agricultural producers with more than \$700 million in revenues—making it the largest Korean market for any U.S. agricultural product.

Maintaining information on pests and diseases

A key to maintaining access to already established international markets and obtaining access to new markets is providing foreign governments with up-to-date scientific information on U.S. plant and animal health status. Quality animal health status information allowed us to reach an agreement on sanitary requirements that permitted the resumption of U.S. poultry exports to Russia. The accord establishes a framework for reviewing U.S. poultry processing plants and cold storage facilities that export poultry to Russia and provides for development of mutually acceptable criteria for review of U.S. facilities in the future. Documentation on six poultry diseases of concern will now accompany birds from farms to processing plants as a result of a cooperative State-Federal-industry program. Through these successful negotiations, we maintained access to Russia's \$500 to \$700 million market for U.S. poultry.

This information is essential if we are to certify U.S. agricultural products for export. In fiscal year 1996, we issued over 279,000 Federal certificates for plant products alone and certified another 527,000 ruminants and horses for shipment to foreign destinations.

Allowing trade from regional areas

We are preparing to seize the economic opportunities that are developing in world trade. "Regionalization" is a key provision in our international trade agreements. It is a concept that the Department of Agriculture has advocated for many years as beneficial to world agriculture.

Under regionalization, countries recognize pest and disease status on an area or regional—rather than national—basis, allowing trade in agricultural products to occur from regional areas. Regionalization will afford U.S. producers exciting new export opportunities, as pest and disease free areas of our country are relieved from restrictions. In addition, adherence to this principle should reduce the impact of trade disruptions if a disease or pest outbreak occurs in a limited region of the United States.

APHIS has proposed a rule setting up the framework for how we would establish regionalization principles. APHIS' proposed criteria for animal disease regionalization would establish requirements for foreign regions based on scientific risk class levels. A region's risk-class level—ranging from "negligible risk" to "very high or unknown risk"—would vary depending on many factors. Among them are the region's geographic location and environment, the prevalence of diseases of concern, and the type of commodity. Other factors to consider are the foreign country's animal health infrastructure, disease monitoring and surveillance systems, and the level of enforcement to contain diseases and pests. Of course, in the realm of international trade, we must be prepared to answer these same questions. We are confident that U.S. agriculture will fare well.

We believe American agricultural producers will benefit from regionalization in the future. Canada has already made the commitment to regionalization by accepting parts of the United States as free of bluetongue disease. The European Community is considering doing the same. We hope to move forward with regionalization and join these countries on this new frontier of agricultural trade.

3. *A third priority is animal and plant health monitoring.*—APHIS must maintain a domestic infrastructure to assure a strong animal and plant health monitoring and surveillance program. As part of this effort, the Agency maintains a cadre of trained, committed professionals to respond immediately to potential animal and plant health emergencies.

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Knowing the health status of our plants and animals

We have in place both formal and informal monitoring and surveillance programs. Our National Animal Health Monitoring System—or NAHMS program—surveys the Nation's livestock and poultry herds. The program's goal is to systematically establish a baseline measure of U.S. livestock and poultry health. Our other formal programs include disease-specific testing and depopulation, foreign disease investigations, and the testing of livestock at slaughter. By using samples from animals at slaughter, for example, we are advancing our surveillance goals to detect, isolate, and eradicate diseases like brucellosis and tuberculosis.

Bovine Spongiform Encephalopathy (BSE) has never been detected in the United States, and the USDA has worked aggressively and proactively to keep it that way. In a recent hearing before the House Committee on Government Reform and Oversight, we explained issues surrounding BSE and actions taken to prevent its introduction. We understand that the public is concerned about BSE, particularly in light of the recent announcement in Great Britain that a newly identified variation of Creutzfeldt-Jakob disease in humans may be linked to the BSE epidemic in cattle. APHIS is continuing to work cooperatively with FSIS, FDA, the Department of Health and Human Service's Centers for Disease Control and Prevention, and other Federal agencies—as well as industry, animal health organizations, and independent scientific experts—to evaluate and reassess our policies regarding BSE. We have established five working groups focusing on specific aspects of the disease. We are committed to maintaining a coordinated, science-based, and effective approach that will keep the United States free of BSE.

APHIS conducts detection surveys for incipient infestations of exotic pests that could potentially cause economic damage if spread in the United States. APHIS and cooperators in the Cooperative Agricultural Pest Survey (CAPS) conduct surveys and manage the data obtained. The data provide Federal and State officials, and the private sector, with information on exotic pest detections, agricultural export requirements, and the management of cooperative pest control programs. APHIS used the CAPS network to implement the National Survey for Karnal Bunt in an emergency response to the detection of the pathogen that caused the disease in Arizona in March 1996. The data gathered through these surveys enabled the Agency to continue certifying wheat for export even after the 1996 detection.

APHIS' places information about diseases and pests directly into the hands of producers, practitioners, and government officials using the latest information technology. We are also taking full advantage of the Internet and using it to quickly and efficiently reach our customers. For example, a sheep producer in North Dakota can link up to our interactive database and get information regarding the voluntary scrapie certification program. A poultry producer in Georgia can visit the APHIS home page to review regulations, search for emergency bulletins, and find current export health requirements. A cattle rancher in New Mexico or a dairy herd owner in Ohio can locate information about national trends collected by our National Animal Health Monitoring System.

We cannot rely solely upon individual programs to protect U.S. livestock. Our efforts to prevent the entry of prohibited animal products at our borders alone cannot protect us. Monitoring and surveillance programs cannot stand by themselves. For this reason, we must continue to explore new projects and new tools.

Our scientists at the National Veterinary Services Laboratories in Ames, Iowa, strive to identify and improve the diagnostic kits and procedures used to test livestock and poultry. Their work with researchers and their attention to the most current veterinary literature have led to several diagnostic advances. These advances include a more accurate method of distinguishing hog cholera virus from a similar virus that causes bovine viral diarrhea and molecular techniques to distinguish pathogenetic from nonpathogenetic strains of avian influenza (AI). Scientists used this test 2 years ago in California to confirm a potentially deadly strain of AI in a shipment of birds. The shipment was denied entry and we prevented millions of dollars of potential losses.

In addition, APHIS will open its Center for Plant Health Science and Technology in Raleigh, North Carolina in 1997. The Center will provide the best possible scientific and technological support for the protection of U.S. plant resources and the facilitation of agricultural trade.

Emergency response

We are not waiting for inspiration to come at the moment of crisis. We have taken steps with State governments and industry to protect U.S. livestock and poultry. Underlying these efforts are three emergency management principles: prevention, preparedness, and response.

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Although APHIS inspectors have remained vigilant in their watch at our ports of entry and have proven an effective first line of defense, we cannot rely simply on prevention. To be prepared, we must constantly educate our people on foreign disease identification and make sure they are armed with the best information available. To do this, we send people across the globe to study first hand the diseases not endemic to the United States. For example, we now have APHIS personnel in Armenia to study Foot-and-mouth disease, and others in Poland to review the hog cholera situation in Central and Eastern Europe. In addition, APHIS assisted the Government of Surinam in detection and trapping activities for the Carambola fruit fly.

The third principle of our emergency management strategy is response. We have two highly prepared and trained teams which act as independent disease eradication forces, specializing in early responses. These teams are dispatched immediately at the first indication of a foreign animal disease or plant pest. They analyze the situation and examine what steps may be necessary. With over \$186 billion in U.S. cash receipts from agricultural products at risk, we must be poised to act quickly when breaches in our preventative security occur.

Last August, we detected exotic Newcastle disease at a pet bird facility in Missouri. An early response team was on the scene immediately. They worked with State officials to trace the incident to smuggled birds. Through quarantines and testing, they eliminated the risk to our commercial poultry industry. Swift identification of the disease and prompt response—two of the things we have been preparing ourselves to do—made all the difference.

4. *A fourth priority is to manage those pests and diseases which have been detected and identified as having a significant impact on U.S. agriculture.*—In cooperation with the States, APHIS works to improve the general health of our Nation's multi-billion dollar agriculture industry through management techniques designed to eradicate harmful pest and diseases, or, if eradication is not feasible, minimize their economic impact.

Protecting people, property, and the environment

The Animal Damage Control (ADC) program helps protect agricultural and natural resources, property, and public health and safety. ADC also provides the world's only research center devoted entirely to the development of methods for wildlife damage management, and currently allocates about \$7 million a year towards non-lethal methods development activities.

Since 1989, ADC has worked closely with the National Agricultural Statistics Service to determine the range and extent of wildlife damage to various agricultural resources. Wildlife damage has been estimated at approximately \$3 billion a year, of which about \$610 million annually is damage to agricultural resources alone.

Bird and other wildlife strikes are a serious economic and safety problem for civilian aircraft in the United States. For the first time, ADC's National Wildlife Research Center, working with the Federal Aviation Administration, completed an analysis of all wildlife strikes reported for an entire year. The 1994 analysis revealed 2,220 reported wildlife strikes to civilian aircraft. Biologists estimate that less than 20 percent of the total strikes were actually reported. The estimated nationwide economic losses from wildlife strikes to civilian aircraft in 1994 exceeded \$100 million. Losses from wildlife strikes to U.S. military aircraft are estimated at \$112 million per year.

ADC has responded by providing assistance to 340 airports across the United States, by recommending or providing appropriate control programs to minimize wildlife hazards in fiscal year 1996. In September 1996, ADC conducted an airport training and certification program for wildlife biologists. Thirty ADC wildlife biologists received specialized training in identifying and managing wildlife hazards to air-traffic safety.

In fiscal year 1994, ADC completed and published the program's final environmental impact statement. Since that time, the program has completed over 40 environmental analyses on site-specific projects throughout the country, and ADC employees have received National Environmental Policy Act training conducted by the National Association of Environmental Professionals and a private contractor.

Managing animal and plant pests and diseases

As a testament to our cooperative efforts with producers and the States, many of our disease eradication programs are nearing successful completion. We have reached a major milestone in the Cooperative State-Federal Brucellosis Rapid Completion Plan by bringing the total number of quarantined herds in the United States down to a record low of 32 as of December 31, 1996. This is a tremendous achieve-

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ment, and we are working our way toward elimination of this disease. We need continued industry cooperation to reach the goal of full eradication by the end of 1998.

We are making significant progress in eradicating bovine tuberculosis. Currently, 44 states are accredited free, and six States are in a modified accredited status. One of our proudest achievements has been the significant decrease in the number of Mexican-origin cattle identified as having tuberculosis at slaughter. Since 1993, there has been a 72 percent decrease in the number of tuberculosis cases in imported Mexican feedlot animals. This is evidence that the Mexican tuberculosis program is progressing and that our ban on Holstein imports, which have a higher percentage of infection than other Mexican cattle, is effective.

APHIS is uniquely capable of managing plant pests because of its infrastructure, statutory authorities, and operational and technical expertise. We have a role in managing plant pests such as grasshopper, noxious weeds, boll weevil, biocontrol, and pink bollworm. We develop and implement new management programs only after broad input and demonstrated potential for success and support. Success requires cooperation with industry, State cooperators, and other Federal Agencies. The ultimate goal of such programs is to transfer the technology to the States and industry.

5. *A fifth priority is to provide Federal leadership in the areas of animal care and horse protection.*—Many citizens are concerned about the care and handling of wildlife in captivity—particularly those used in exhibition in zoos and circuses. We are striving to address their concerns and to make certain that all animals covered under the Animal Welfare Act receive proper care and treatment. We are counting on continued cooperation with our partners to carry out our regulatory responsibilities effectively. More and more, we are reaching out to form new partnerships with State and local governments, animal welfare advocates, and members of the industry to assist us in educating the public about animal health and welfare issues. For example, APHIS officials recently entered into a memorandum of understanding with officials from the State of Missouri to enable us to share information from our AWA inspections with them. This arrangement allows us to provide Missouri State officials with copies of our inspection reports of licensed premises. In return they provide us with any information they have about individuals conducting regulated activities without a license.

We are also continuing to pursue augmentation of our AWA enforcement authority. For instance, we want to increase our authority to refuse to issue or renew licenses to individuals not in compliance with the AWA—or anyone convicted of violating any Federal, State, or local animal welfare law.

One of our particular concerns is the care and handling of elephants. Certainly, we are very much aware of the increasing public attention and concern about the treatment these animals receive in zoos and circuses, as well as the methods used to train them. In response, we have developed regulatory proposals relating specifically to the treatment and training requirements for elephants and other dangerous exotic animals.

To improve enforcement of the Horse Protection Act (HPA), APHIS officials depend on individuals certified through the Designated Qualified Persons (DQP) program to assist in monitoring horse shows for compliance. Our strategic direction for improved enforcement of the HPA calls for a greater emphasis on the important role DQP's play in preventing the mistreatment of horses. Many concerned individuals have contacted APHIS officials about this important issue, and we will consider their views as we develop and further refine our objectives and proposals.

6. *A sixth priority is to develop new or improved scientific methods for our work.*—These scientific and technical activities help carry forward the efforts of protecting American agriculture with the most effective exclusion, monitoring, and management methods.

The National Wildlife Research Center researchers have made significant progress toward developing immunocontraceptive vaccines for non-lethal wildlife damage management. We are developing new animal drug applications for submission to FDA to permit field testing of zona pellucida vaccine and gonadotropin releasing hormone vaccine for the control of deer and other damage causing wildlife.

Biotechnology Advances

In fiscal year 1996, APHIS issued determinations of non-regulated status for seven new plant varieties: herbicide tolerant cotton; male sterile and herbicide tolerant corn; tomato with altered fruit ripening; Colorado potato beetle resistant potato; virus resistant squash; herbicide tolerant soybean; and virus resistant papaya. Also, the Agency continued to provide daily Internet updates on field testing and commercialization of new agricultural crop varieties.

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We have established three broad goals for the international harmonization of regulations for genetically modified products. First, we will seek to ensure the integration of compatible national approaches. This means we will work with other countries, including all European countries, to identify the common aspects of our regulatory systems. By doing so, we can build confidence in each other's review processes and work to extend existing regulatory approaches for traditional plant products to new, genetically modified products. Second, we will work with other countries to ensure that our different national regulatory approaches are coordinated. Toward this end, we will work in bilateral and multilateral forums, such as the Organization for Economic Cooperation and Development, to exchange information on how reviews of genetically modified plants are being conducted and on products being researched. Third, we will work to ensure that scientific principles are used in evaluating genetically modified products. We strive to base our review system on rational, science-based regulations. Under recent trade agreements, this regulatory approach has been further supported at the international level.

FISCAL YEAR 1998 BUDGET REQUEST

The current law request proposes \$424 million for salaries and expenses, compared to the fiscal year 1997 current estimate of \$435 million. On the mandatory side we anticipate having available an additional \$41 million for the AQI user fee program based on the FAIR Act authority, bringing that program to a program level of \$141 million. We request \$7.2 million for maintenance and modernization of APHIS facilities in 1998. Of this amount, \$3.2 million would be provided, in addition to a \$5 million proposal included in the Agricultural Research Service's budget, to support continued modernization of the Plum Island Animal Disease Center, Plum Island, New York. We would fund general repairs and maintenance on existing buildings with the remaining \$4 million.

We request approximately \$9 million, as compared to \$4 million in 1997, for pest detection activities. This increase is largely needed for the Karnal Bunt (KB) program to enable APHIS to assure all trade partners that KB is not present in major wheat-producing areas of the United States. The budget request also contains an increase of \$1.3 million for the AQI appropriated program, which is responsible for inspecting people and cargo crossing the Mexican and Canadian borders; those traveling from Hawaii and Puerto Rico to the mainland; as well as private and military aircraft and small tonnage vessels from Hawaii and Puerto Rico. Because of increased traffic of untreated Asian and European agricultural products into the United States through Canada, we must increase inspections to reduce the risk of introducing exotic agricultural pests via this route. We will conduct additional predeparture inspections in Hawaii and preclearance inspections in Canada and Mexico. The budget proposes a decrease of \$3.3 million for Animal Damage Control Operations. This reduction will produce savings in Federal ADC spending by encouraging States and private entities that do not currently spend a matching amount to contribute at least 50 percent to the cost of operating the direct activities from the ADC program in their State. The budget proposes to maintain the current level of support for States that cost share in excess of 50 percent. The budget also proposes a decrease of \$9.8 million in the boll weevil program since it is no longer necessary to provide Federal funding in areas where the boll weevil does not exist. APHIS will still offset initial start-up cost in new program areas, as well as oversee and provide technical support to boll weevil detection and control activities in the eradicated and non-infested areas.

Let me highlight a few of our proposals in more detail. The first proposal relates to Animal Damage Control Operations. While the Administration supports an effective ADC program, we feel that, in many instances, cooperators need to accept a greater responsibility in paying for the services that they receive. In addition, there is currently a significant disparity between the portion of the total program that each State pays—ranging from zero percent to 94 percent. Many States pay a significant portion of their program costs, and should be congratulated. Other States need to do better. The Appropriations Committees, in fiscal year 1997 report language concurred with this by encouraging "cost sharing of control activities to the maximum extent possible". Therefore, the Administration has proposed paying no more than 50 percent of each State's total program. This is not a question of supporting the ADC program, but rather one of fairness and equity between the Federal government and cooperators, and among cooperators.

Second is the proposed screwworm facility in Panama. We realize the problems associated with continuing the operation of the current fly rearing facility located in Mexico. Therefore, the budget includes sufficient funding, through the use of prior balances, for the architectural and engineering work and environmental studies as-

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sociated with the construction of a new fly rearing facility in Darien. We anticipate that the facility will be ready for operation during fiscal year 2000, which is when we expect that it will be needed.

Third, within the increase requested for pest detection, we propose to use approximately \$500 thousand to work with other agencies to look at potential future infestations, and determine the appropriate control measures. The costs associated with dealing with Karnal bunt have taught us that we may need to consider alternative responses that may be less costly to both the government and the industry. This will be an ongoing effort.

Finally, we have proposed savings from the enactment of five new user fees. I realize that in many cases, user fees are not popular. However, I urge the Committee to consider these fees in the context of who the main beneficiaries are.

CONCLUSION

APHIS has achieved great success in protecting American agriculture, of which we are most proud. Animal and plant pests and diseases, however, are very tenacious and can reinfect or reinfest if we let down the safeguard. Every day there are thousands of opportunities for exotic pests and diseases to violate our borders and pest and disease free areas. We can and must continue our record of success as we move toward the third millennium. With the cooperation of Federal and State governments and industry, we will continue to find new ways to do so. Together, we can continue to improve and protect the health of the Nation's animal and plant resources and the economic opportunities that effort represents.

We appreciate the Committee's strong support of our programs in the past, and look forward to meeting the challenge of protecting and strengthening American agriculture in the future. We will be happy to answer any questions.

PREPARED STATEMENT OF LON S. HATAMIYA

Mr. Chairman and Members of the Committee, I am pleased to have this opportunity to represent the Agricultural Marketing Service and to present our fiscal year 1998 budget proposals.

MISSION

First, I would like to remind you of our agency's mission, strategic goals, activities, and funding sources, and mention a few current issues in the agricultural marketplace.

The mission of the Agricultural Marketing Service is to facilitate the strategic marketing of agricultural products in domestic and international markets, while ensuring fair trading practices and promoting a competitive and efficient marketplace, to the benefit of consumers of U.S. food and fiber products. In other words, our programs are designed to help create more efficient markets which benefit agricultural producers, processors, and consumers.

STRATEGIC GOALS

AMS' strategic goals are: 1) to provide high quality service and products, in a cost-effective and efficient manner, to meet changing customer needs; 2) to develop new marketing services to increase customer satisfaction and expand our customer base; and 3) to tailor and focus agency services to better facilitate strategic marketing of U.S. agricultural products in international markets.

ACTIVITIES

Our Market News, Standardization and Grading activities facilitate the domestic and international marketing of agricultural commodities. The AMS Market News program provides timely, accurate, and unbiased market information on numerous agricultural commodities. Market information assists agricultural producers and traders to make critical buying, selling, and pricing decisions. Commodity standards provide a common language of quality for buyers and sellers in the U.S. and abroad. AMS grading and certification services provide an impartial evaluation of product quality so that purchasers can buy commodities without having to personally inspect them.

The Shell Egg Surveillance program assures consumers of the safety of shell eggs by monitoring the proper disposition of certain undergrade and restricted eggs through regular inspections of shell egg handling operations.

Our Market Protection and Promotion activities include Organic Certification, Pesticide Recordkeeping, Federal Seed, and Research and Promotion. The Organic

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Certification program is developing national standards and definitions to govern the production and handling of “organic” agricultural products so that consumers can be assured of the validity of the label. The program will also accredit agents who will certify organic products to facilitate trading between the states and abroad. The Pesticide Recordkeeping Program educates private certified applicators of Federally restricted-use pesticides about recordkeeping requirements, and monitors compliance with those requirements. The Federal Seed Act program protects growers by regulating agricultural and vegetable seed moving in interstate commerce, prohibiting false labeling and advertising, and prohibiting the shipment of prohibited noxious-weed seed into a State. When a violation is verified by testing and investigation, program personnel administratively resolve the complaint or initiate legal action. Research and promotion programs are used by agricultural producers to broaden and enhance national and international markets for various commodities. Each of these industry-funded programs reimburses AMS for the cost of overseeing its program.

AMS’ Wholesale Market Development program works to expand and improve domestic markets for agricultural products by providing technical advice and assistance to states and municipalities that are interested in creating or upgrading wholesale markets, auction and collection markets, retail and farmers’ markets, and urban markets. Program personnel also conduct cooperative feasibility studies to evaluate and suggest more efficient ways to handle and market agricultural products.

The nation’s transportation system is crucial for agricultural products to reach their markets. AMS provides technical assistance to shippers and carriers and participates in transportation regulatory actions. We also provide economic analysis and recommend improvements to domestic and international agricultural transportation.

The Federal-State Marketing Improvement program makes matching funds available to state marketing agencies to improve the efficiency of the agricultural marketing chain. Such projects might identify and test alternative farm commodities, identify international markets, or test the use of new technology in agricultural marketing.

The Perishable Agricultural Commodities Act, or PACA, protects producers, shippers and distributors from loss due to unfair and fraudulent practices in the marketing of perishable agricultural commodities. Our PACA program enforces the Act by investigating violations.

AMS uses Section 32 funds to stabilize market conditions and improves the returns to producers through marketing agreements and orders and commodity purchases. Marketing agreements and orders are regulations that are requested and funded by the regulated producers and handlers, and locally administered by marketing order committees and market administrators. AMS oversees and administratively supports the activities of the industry. AMS purchases selected meats, fish, poultry, fruits and vegetables to remove excess supplies from the markets and provide a dependable supply of agricultural commodities for the National School Lunch and other domestic feeding programs.

FUNDING SOURCES

Despite our wide range of activities, AMS places a universal emphasis on providing service as cost-effectively as possible. This is because over 75 percent of AMS funding is revenue we generate by providing services voluntarily requested by our customers. Because our programs depend on our customers’ requests for service, we must ensure that these services evolve to meet the needs of our customers, and that the fees we charge are acceptable to industry. We operate all of our programs—user-funded and appropriated—on this cost-conscious principle. All of our Marketing Services programs—including market news, pesticide recordkeeping, Federal Seed, organic standards, transportation, and wholesale market development—as well as our Federal/State Market Improvement Program, are operating on less than \$40 million in appropriated funds this year. Administrative costs for commodity purchase services and marketing order oversight are funded from Section 32 customs receipt funds. Our user funded programs total \$171 million.

CURRENT ISSUES

Before I present our budget proposals, I would like to discuss the AMS programs that received increased funding this fiscal year.

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Domestic Market Reporting

This fiscal year, Congress appropriated additional funding to support domestic market reporting. Because several key agricultural production states reduced or completely eliminated their market news programs, AMS has increased its Market News activities to maintain the integrity of national market reporting. Producers, marketers, and others in related industries rely on AMS Market News data on agricultural commodity supply, movement, contracts, inventories and prices to make selling, buying, and pricing decisions. We must have sufficient information on major production and market states, such as California, to present an accurate picture of the national market. The AMS Market News Program has absorbed those nationally significant reporting functions formerly provided by states through a series of consolidations and a shifting of resources, and by adding staff where necessary. These changes, which include establishing a new office in Fresno, California, and reporting California livestock, grain, and hay markets from AMS offices in Washington, Oregon, Arizona, and Colorado, will enable us to continue to provide timely, accurate, and unbiased market information.

Pesticide Recordkeeping

We also received funding this year to expand pesticide recordkeeping monitoring activities nationwide. The Pesticide Recordkeeping Program was established by Congress in 1990 to ensure that certified private applicators of restricted use pesticides maintain records comparable to records maintained by commercial applicators in each state. This program provides data that can be used by state and Federal agencies to design sound pesticide practices and by the medical community for treatment of individuals exposed to pesticides.

AMS is working to provide national coverage by providing educational materials, programs, and inspections of private applicators' records. In the majority of states, these activities are accomplished through cooperative agreements with the state designated agencies. Where states are unable to enter into a cooperative agreement with AMS, Federal employees will conduct inspections of certified private applicators' records and provide educational information. AMS will also continue to provide funding for state programs that train certified applicators, and the development of educational materials by state and Federal programs. The State Cooperative Extension Services and other organizations deliver educational information to people affected by the regulations. We expect the program to reach national coverage by the end of 1998.

FISCAL YEAR 1998 BUDGET REQUESTS

Now, I wish to present our budget requests. We are proposing a net increase in Marketing Services funds totaling \$11.3 million; \$320 thousand for international market reporting, \$500 thousand to expand market reporting to help counter the effects of market concentration, \$505 thousand to implement the Organic Certification Program nationwide, and \$9.8 million to restore funding for the Pesticide Data Program to AMS. We are also proposing user fees for oversight of marketing agreements and orders.

International Market News

To effectively compete in export markets, U.S. agriculture must have easy access to a consistent, public source of timely information on international prices. For fiscal year 1997, the forecast for U.S. agricultural exports is approximately \$56 billion, with a volume of almost 147 million metric tons. This year, livestock products, poultry meat and horticultural exports are expected to reach record levels. Meat exports are expected to reach almost \$5 billion, poultry and poultry products \$3 billion, and horticultural exports are forecast at almost \$11 billion. Of total agricultural exports, about 43 percent are expected to come from sales in Asia, 16 percent in Western Europe, and almost 17 percent in Latin America. Agricultural imports are forecast at \$34 billion in fiscal year 1997. The fiscal 1997 agricultural trade surplus is projected at almost \$22 billion.

AMS is currently collecting limited international market information, but more in-depth information from a wider array of markets is needed. For example, the meat industry is requesting more information from Korea and other Pacific Rim countries to remain competitive in the rapidly expanding world meat market. AMS reporters will need to establish contact with private companies and government sources to collect and exchange market information. Cost increases to provide foreign market information would include reporters, travel, and electronic communications. Improving our knowledge of overseas markets should have a significant positive impact on the ability of our products to compete successfully in the international marketplace.

Enhanced Market Reporting

We must also adapt to market changes occurring in the U.S. The Department is increasingly concerned about the effects of industry concentration and the resulting potential for non-competitive behavior. Concentration can have a significant negative impact on small farmers and producers. The Secretary's Advisory Committee on Agricultural Concentration recommended that the price discovery and reporting processes be enhanced to ensure fair competition. The advisory committee recommended that AMS Market News: 1) increase its reporting on the terms of cattle traded under contract sales, 2) expand its reporting of value-based pricing indicators, 3) institute more timely and more detailed reports of import and export data on livestock and meat, and 4) report the distribution of slaughter cattle by grade and yield on a regional basis. Initial steps have been taken to address these information needs; however, resource availability is limiting our ability to be fully responsive. These initiatives will require additional AMS reporters, more travel, and improved technology to cover auction sales and to collect additional information from producers and packers.

Organic Certification

The organic food industry is estimated to have a value of nearly \$3 billion and is growing more than 20 percent a year. With this growth has come increasing confusion in the marketplace about what is and what is not organic. The Organic Foods Production Act of 1990 required the Secretary to establish and implement national minimum organic standards and a program to certify organic production. The Act was requested by the organic community after they observed problems such as fraudulent use of the term "organic", customer confusion, variations among certifiers on standards and requirements, and excessive documentation required by foreign importers before they would accept products certified in the U.S. By using recommendations from the National Organic Standards Board and public input from certifiers, consumers, producers and handlers, AMS has developed a public-private partnership that encourages innovation within the boundaries of organic principles and legislative intent.

National standards and definitions of agricultural products that are organically produced will facilitate the movement of products between States and assure consumers of the validity and integrity of the organic label. Beyond the domestic market, standardized organic production will facilitate international marketing of U.S. organic products. We will work to harmonize AMS standards with those of existing and developing international organic programs.

The National Organic Standards Board—which consists of growers, processors, consumers, environmentalists, a retailer and a scientist—has prepared recommendations on more than 120 substances for the National List of allowed synthetics and prohibited natural substances for use in organic production and processing. We expect to publish the rules and implementation plan for production and processing standards and for accreditation of certification agents this year. After that, we will begin accrediting representatives of state agricultural departments and private persons who will inspect producers and handlers to certify compliance with the organic program. We need additional resources to expedite development of the program, ensure labeling integrity, and facilitate global trade of our country's organic products. Once the program is fully established, certifying agents will be assessed fees for USDA accreditation, which is provided for under current legislative authority. Any fees collected will be deposited into the Treasury.

Pesticide Data Program

The Food Quality Protection Act, passed in August 1996, confirmed the need for collection of pesticide residue data. The Act states that "The Secretary of Agriculture shall ensure that the residue data collection activities conducted by the Department of Agriculture in cooperation with EPA and the Department of Health and Human Services, provide for the improved collection of pesticide residues, including guidelines for the use of comparable analytical and standardized reporting methods, and the increased sampling of foods most likely consumed by children." The fiscal year 1997 Appropriations Act cut funding for the Pesticide Data Program from AMS and placed it in EPA's budget for fiscal year 1997. EPA has been working with the cooperating states and AMS to ensure that data collection is continued. For fiscal year 1998, we are requesting that the Pesticide Data Program funding be returned to AMS.

Since the program's inception five years ago, we have established statistically reliable procedures, an automated information system for pesticide residue data, and good working relationships with industry and participating state and Federal agencies. AMS' procedures are statistically designed to make unbiased estimates of resi-

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dues collected in the ten cooperating states that represent half of the U.S. population. Between 50 and 60 samples of each commodity are collected and analyzed each month. The pesticides targeted for data collection were selected by EPA in consultation with AMS. The commodities chosen for testing are among those most prevalently consumed by the American public. The number of fruits and vegetables collected is based on state population, wheat samples are collected based on state and monthly production data, and milk samples are collected based on state production and represent at least 45 percent of the available fluid milk in the U.S. market. Samples are collected as close to the consumer as possible, ensuring an estimate of actual exposure that includes post-harvest applications of fungicides and growth regulators. Also, before analysis, samples are prepared according to practices of the average consumer (such as peeling or washing). Since the program began, 25 commodities have been included for testing, 19 of which are considered high consumption commodities by infants and children. Eleven commodities are currently included in the program.

The Administration believes funding the Pesticide Data program through AMS is more appropriate than EPA. The program has thrived and grown in international stature because we were able to rely on our agricultural marketing expertise to develop a statistically reliable testing system. The AMS residue testing results have been used to confront barriers to international trade of U.S. agricultural commodities and in the establishment of international standards. USDA's Foreign Agricultural Service uses data from the program to convince foreign governments that our food is safe, and has found the program's findings to be an invaluable tool in facilitating U.S. exports. Pesticide Data Program personnel also provide information to the Codex Alimentarius Commission and the World Health Organization.

AMS already has the systems, equipment and experience needed to consolidate and report the vast quantities of data collected, and we have proven that we can operate this program effectively and efficiently to carry out residue testing work that will satisfy the public's demand for a safe food supply.

LEGISLATIVE PROPOSAL

We are again proposing authorizing legislation that will allow AMS to collect assessments for the Federal oversight of marketing agreements and orders. The proposed fees would cover the costs of establishing and amending the orders through public hearings, and other general oversight and administration of the program. Currently, all Federal oversight of these programs is funded from the Section 32 permanent appropriation. The Secretary issues marketing agreements and orders for a given marketing area in response to requests by a majority of producers. Marketing orders are administrated locally by marketing order committees and market administrators whose costs are already funded from assessments on regulated producers and handlers. AMS proposes to recover Federal costs through increased assessments paid by the producers and handlers who benefit from the agreements and orders. Each industry would have to determine whether or not the benefits provided by their marketing order were sufficient to outweigh the additional cost. We estimate that this proposal will result in savings of \$10.7 million, offset in fiscal year 1998 by one-time liabilities costs of about \$500 thousand, for a net savings of \$10 million in the first year.

BUDGET REQUEST SUMMARY

In total, our 1998 budget request includes \$49.8 million in appropriated funding for our marketing services programs, \$1.2 million for Payments to States and Possessions, and \$16.9 million from Section 32 funds for administration of commodity purchase services and marketing agreements and orders. Approval of the legislative proposal to charge user fees for marketing agreements and orders would reduce our request by \$10.2 million. Thank you for this opportunity to present our budget proposals.

PREPARED STATEMENT OF JAMES R. BAKER

Mr. Chairman and members of the Committee, I am pleased to submit the fiscal year 1998 budget proposal for the Grain Inspection, Packers and Stockyards Administration (GIPSA).

GIPSA is part of USDA's Marketing and Regulatory Programs, which are working to ensure a productive and competitive global marketplace for U.S. agricultural products. GIPSA's mission is to facilitate the marketing of livestock, poultry, meat,

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cereals, oilseeds, and related agricultural products, and to promote fair and competitive trading practices for the overall benefit of consumers and American agriculture.

Our mission is carried out in two different segments of American agriculture. GIPSA's Federal Grain Inspection Service (FGIS) provides the U.S. grain market with Federal quality standards and a uniform system for applying them. Our Packers and Stockyards Programs (P&S) ensure open and competitive markets for livestock, meat, and poultry.

GIPSA has both service and regulatory roles. It provides impartial, accurate quality and quantity measurements to create an environment that promotes fairness and efficiency. And, the Agency's programs provide financial protection to livestock producers and ensure fair and competitive markets.

The existence of GIPSA as an unbiased, third-party entity helps ensure a fair and competitive marketing system for all involved in the merchandising of grain and related products, livestock, meat, and poultry.

ORGANIZATION

GIPSA is comprised of approximately 840 personnel, including full-time, temporary, and intermittent employees. GIPSA personnel are situated in field locations across the country to serve our customers.

Federal grain personnel work with over 2,000 State and private inspectors to provide high-quality inspection and weighing services on a user-fee basis. Federal inspectors service 42 export elevators located in Georgia, Illinois, Indiana, Louisiana, Maryland, New York, Ohio, Oregon, and Texas. A small Federal staff also provides service at 6 export elevators in Eastern Canada for U.S. grain transshipped through Canadian ports. Eight delegated States provide services at an additional 20 export elevators located in Alabama, California, Minnesota, Mississippi, South Carolina, Virginia, Washington, and Wisconsin. Sixty-five (65) designated agencies service the domestic market under GIPSA supervision. In 1996, this unique mix of Federal, State, and private inspection agencies provided 2.3 million inspections on an estimated 250 million metric tons of grains and oilseeds; issued over 118,000 official weight certificates; weighed over 114 million metric tons of grain; and met trade teams representing 38 countries around the world to teach them about GIPSA and the U.S. grain marketing system.

GIPSA's Packers and Stockyards Programs' is comprised of 180 full-time employees; 135 of whom are employed in 11 offices strategically located throughout the United States to monitor compliance with the P&S Act. During fiscal year 1996, GIPSA concentrated resources on providing financial protection and promoting fair business practices and a competitive marketing environment for livestock, meat, and poultry. The Agency conducted over 2,000 investigations, disclosing over 800 violations of the P&S Act. Formal actions were requested in 84 cases and 62 administrative or justice complaints were issued in order to bring firms into compliance with the P&S Act. Administrative decisions and orders were issued in 49 cases during fiscal year 1996; however, most violations were corrected on a voluntary basis with several resulting in livestock and poultry producers receiving additional funds for the sale of their product.

This, of course, is only a brief summary of our accomplishments. I'd like to provide some more in-depth information about our programs and their activities.

GIPSA'S FEDERAL GRAIN INSPECTION SERVICE

GIPSA's grain program plays a critically important role in facilitating the marketing of U.S. grain and related commodities. We provide the U.S. grain market with Federal quality standards and a uniform system to apply these standards. Through this program, GIPSA provides descriptions (grades) and testing methodologies for measuring the quality and quantity of grain, rice, edible beans, and related commodities, and, provides an array of inspection and weighing services, on a fee basis, through a unique partnership of Federal, State, and private laboratories.

By serving as an impartial third party, GIPSA ensures that the standards are applied and the weights recorded in a fair and accurate manner. Our presence in the market advances the orderly and efficient marketing and effective distribution of U.S. grain and other assigned commodities from the Nation's farms to domestic and foreign buyers.

Our guidance in carrying out these important tasks is provided by the U.S. Grain Standards Act (USGSA) and the Agricultural Marketing Act of 1946 (AMA) as it relates to the inspection of rice, pulses, lentils, and processed grain products. Under these two Acts, GIPSA:

—Establishes official U.S. grading standards and testing procedures for eight grains (barley, corn, oats, rye, sorghum, triticale, wheat, and mixed grain), and

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- four oilseeds (canola, flaxseed, soybeans, and sunflower seed) under the USGSA; and for rice, lentils, dry peas, and a variety of edible beans under the AMA.
- Provides American agriculture and customers of U.S. grain around the world with a national inspection and weighing system that applies the official grading and testing standards and procedures in a uniform, accurate, and impartial manner.
- Inspects and weighs exported grain and oilseeds. Domestic grain and oilseed shipments, grain and oilseed imported into the United States, and crops with standards under the AMA are inspected and weighed upon request.
- Monitors grain handling practices to prevent the deceptive use of the grading standards and official inspection and weighing results, and the degradation of grain quality through the introduction of foreign material, dockage, or other nongrain material to grain.

Through these permissive and mandatory programs, GIPSA promotes the efficient and effective marketing of U.S. grain and other commodities from farmers to end users.

To better illustrate the impact and efficiency of GIPSA's grain inspection program, consider the following: USDA's "Outlook for U.S. Agricultural Exports" (December 4, 1996) reports that in fiscal year 1996, U.S. exports of wheat, corn, coarse grains, rice and soybeans were valued at approximately \$27 billion. GIPSA's grain program, which operates on a user fee basis, collected fee revenue of \$30 million for over 2.3 million official inspections, 600,000 protein and oil tests, 115,000 mycotoxin tests, and a variety of other official inspection and weighing services on these exports. Our revenues totaled a little over one-tenth of 1 percent of the total value of the exports.

In fiscal year 1996, GIPSA's grain program pursued a number of initiatives to improve service delivery and organizational effectiveness. We recognize that re-engineering and automating our business and administrative functions are essential if we are to contain costs, lessen the risks, and increase the productivity associated with grain handling.

In fiscal year 1996, GIPSA continued to work closely with the U.S. grain handling industry on Electronic Data Interchange (EDI), an electronic commerce project designed to automate business transactions involving U.S. grain. As part of this important initiative, GIPSA is developing a standardized data file for its inspection and weighing results that will directly support the EDI functions.

Also in fiscal year 1996, GIPSA began implementing a reengineered quality assurance and quality control program for the official grain inspection system to ensure the quality and accuracy of inspection results nationwide. The new, proactive program integrates automation technology, empowerment of front-line employees, and statistical quality control processes to further improve the performance of the official inspection system.

GIPSA continued cooperative efforts with the National Institute of Standards and Technology and the National Conference on Weights and Measures to standardize commercial grain inspection equipment as part of the National Type Evaluation Program (NTEP). GIPSA serves as the sole NTEP laboratory for grain inspection equipment. In fiscal year 1996, GIPSA continued to collect calibration data that were used as the basis for numerous grain moisture meter calibration changes to improve the accuracy and consistency of commercial grain moisture measurements.

Our efforts to facilitate the marketing of U.S. grain are not concentrated solely within our borders. GIPSA also is working to help educate our worldwide customers about the quality and value of U.S. grain exports. In fiscal year 1996, GIPSA representatives met with 77 teams from 41 countries to provide information, technical guidance, and educational seminars.

The grain program will continue to work to ensure our relevance and value to American agriculture. We are reaffirming our commitment to facilitating the marketing of U.S. grain by responding to our customers' needs and providing the highest quality grain inspection and weighing services to all whom we serve—from farmer to domestic and international end users, and all those in between. Our efforts in fiscal year 1997 will focus on networking the Federal, State, and private partners comprising the system, and working with our customers to identify how we can apply automation to reengineer our administrative and inspection processes to achieve greater efficiency and productivity.

In fiscal year 1997, our commitment to improved efficiency and effectiveness will continue to serve American agriculture well, as U.S. agricultural exports are expected to total \$55.5 billion. Exports of wheat, corn, coarse grains, rice and soybeans are expected to account for \$18.5 billion of that total ("Outlook for U.S. Agricultural Exports," December 1996).

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GIPSA'S PACKERS AND STOCKYARDS PROGRAMS (P&S)

The principal purpose of GIPSA's Packers and Stockyards (P&S) Programs is to provide financial protection and promote fair business practices and a competitive marketing environment for livestock, meat, and poultry. Our programs foster fair and open competition, and guard against deceptive and fraudulent practices affecting the movement and price of meat animals and their products. We also work to protect consumers and members of the livestock, meat, and poultry industries from unfair business practices. To carry out these important roles, GIPSA:

- Administers the Packers and Stockyards Act of 1921.
- Carries out the Secretary's responsibilities under Section 1324 of the Food Security Act of 1985, which permits States to establish "central filing systems" to prenotify buyers, commission merchants, and selling agencies of security interests against farm products, and issue regulations and certify the systems that meet the criteria in the statute.
- Enforces the Truth-in-Lending Act, the Fair Credit Reporting Act, and the Freedom of Information Act as each relates to persons and firms subject to the P&S Act.

The production and marketing of livestock, meat, and poultry are important to American agriculture and significantly impact the Nation's economy. The Commerce Department estimates the annual wholesale value of livestock, meat, and poultry products to be approximately \$95 billion. At the close of fiscal year 1996, there were 1,348 stockyards; 6,988 market agencies/dealers; and 2,169 packer buyers registered with GIPSA to engage in the livestock marketing business. There also were approximately 6,000 slaughtering and processing packers; an estimated 6,500 meat distributors, brokers, and dealers; and an estimated 225 poultry firms subject to the P&S Act.

GIPSA's P&S Programs continues to provide payment protection to livestock and poultry producers by focusing on the financial area. Financial investigations during fiscal year 1996 resulted in \$3.5 million being restored to custodial accounts established and maintained for the benefit of livestock sellers. Packer and poultry trust activities also returned over \$400,000 to livestock sellers and over \$100,000 to poultry growers during the fiscal year. Dealers and market agencies are required to meet solvency requirements, a critical component of payment protection of the P&S Act. During fiscal year 1996, 205 insolvent dealers and market agencies corrected or reduced their insolvencies by \$11.2 million.

GIPSA closely monitors anticompetitive practices which may be impeding the free trade of livestock. Any practice, agreement, or understanding that excludes potential buyers from bidding in open competition is considered a restraint on competition. Examples of such practices include apportioning territories, price agreements or arrangements not to compete, and payoffs or kickbacks to buyers. A high priority is placed on investigating all complaints and further developing information received concerning the failure of livestock dealers, market agencies, or packers to compete for the purchase of livestock.

In 1996, a major investigation of fed cattle procurement practices in Kansas was completed. The investigation examined over 15,000 purchase transactions involving 2 million head of cattle. The results, which were released in March 1996, indicated that supply and demand factors were the primary causes of price declines in the spring of 1995. In fiscal year 1996, GIPSA began several actions to increase enforcement activities in the area of anticompetitive-type practices involving the Nation's major meat packers. The Agency initiated a major cattle procurement investigation in Texas that will examine over 37,000 purchase transactions involving over 6 million head of cattle sold during 1995 and 1996. A major slaughter hog procurement investigation was also initiated during 1996. This investigation will examine approximately 50,000 purchase transactions involving over 2.5 million head of slaughter hogs. Using data from the Kansas and Texas fed cattle investigations, GIPSA will conduct economic analyses during fiscal year 1997 on the effect of forward contracting, packer feeding, and marketing agreement/formula pricing arrangements.

In fiscal year 1997, GIPSA will continue to improve the efficiency of its P&S Programs, and ensure that the programs play an effective role in the U.S. livestock, poultry, and meat marketing system. A key activity in our improvement process involves a review by USDA's Office of the Inspector General (OIG) of current enforcement practices under the P&S Act. The OIG review is expected to provide data on how GIPSA can maximize its effectiveness and make full use of its authority to investigate and correct anticompetitive practices and arrangements. The review also will examine whether GIPSA's structure and operating practices and procedures should be modified to enhance its responsiveness to the needs of a changing industry.

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Also in fiscal year 1997, GIPSA will solicit public comment on the need for regulations addressing contract poultry grower financial arrangements. Currently, the predominant method used to pay growers for flocks under a poultry growing arrangement is based on a system that compares a grower's results to that of other growers during a specified time period. Many poultry growers have repeatedly expressed concern that comparing their production costs against those of other growers to determine payment is unfair. Growers also have expressed concerns about the accuracy of feed weights and feed delivery, pickup procedures, and the procedures for weighing live birds picked up for slaughter.

As you can see, a great deal was accomplished in fiscal year 1996 and much is planned for fiscal year 1997 in both of GIPSA's program areas. Our efforts to continuously improve our programs and services were greatly enhanced last fiscal year by the development of the Agency's first strategic plan.

STRATEGIC PLANNING

The GIPSA Strategic Plan was developed to guide the agency into the next century and to help ensure that our programs and services remain relevant to our customers and American agriculture. The American public and international customers of U.S. agricultural products want an ample supply of quality food at a reasonable price. This means American markets must be efficient, competitive, and quality-conscious. GIPSA's general goals, as well as the agency's products and services, are oriented toward fulfilling this need for a fair, competitive, and efficient market system.

The strategic plan, developed in a cooperative effort by all GIPSA employees and our customers, outlines four major goals that will guide our planning processes and initiatives for the upcoming years:

- We will ensure that programs are cost-effective and responsive to markets served.
- We will ensure that the credibility of programs is unquestionable.
- We will ensure that GIPSA employees are highly-skilled professionals providing quality customer service.
- We will work to harmonize customers' expectations with GIPSA's authority and capabilities.

As part of the strategic planning process, GIPSA identified several measures that will allow us to quantitatively evaluate our performance. In the grain program, in fiscal year 1998, GIPSA will begin measuring the performance of the new quality assurance and control system for accuracy and consistency; the average cost of oversight per metric ton of grain inspected; the number of new tests developed and improved methods/calibrations implemented; and the average cost of export grain inspection per metric ton.

For the P&S programs, GIPSA will implement a new electronic tracking system for complaints and investigations. This will enable us to establish performance goals based on the new tracking and monitoring system, and to provide for more effective allocation of resources. In developing our strategic plan, GIPSA reaffirmed its commitment to strengthening the cost-effectiveness, responsiveness, and credibility of our programs and services. In fiscal year 1998, GIPSA will be pursuing a number of initiatives that will reflect the goals and commitments outlined in our strategic plan. As mentioned above, these initiatives include establishing guidelines and developing the technology for joint industry/GIPSA ventures to automate the grain inspection process at export grain elevators; designing and implementing an investigation tracking and monitoring system; networking all of the Federal, State, and private partners comprising the official grain inspection and weighing system; implementing a new quality assurance and control program for grain inspection activities; and conducting regional and industry-wide reviews and investigations in the livestock, meat, and poultry industries.

FISCAL YEAR 1998 BUDGET REQUEST

To fund these important initiatives and to enable GIPSA to remain a valuable part of American agriculture, under current law, GIPSA's total budget request for fiscal year 1998 is \$68.8 million, of which \$25.7 million represents appropriations. The remaining \$43.1 million represents user fee authority for inspection and weighing services.

For fiscal year 1998, the President's budget proposes a total program level for grain inspection of \$54.0 million, with \$10.9 million appropriated for compliance, standardization, and methods development activities. The fiscal year 1998 budget also proposes legislation to authorize the collection of \$3.6 million in additional user fees to cover the costs of grain standardization activities.

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For P&S Programs, the budget proposes \$14.8 million, which includes increases of \$225,000 to allow GIPSA to establish electronic filing procedures for annual reports, which is consistent with the requirements of the Paperwork Reduction Act of 1995; \$1,595,000 for activities in the packer competition and industry structure areas; and \$750,000 for poultry compliance activities.

Increasing concentration, structural change, market performance, and the use of complex formula and value-based marketing systems by packers continue to raise questions of regulatory and policy significance. Additional resources will allow GIPSA to expand our capability to monitor and investigate the competitive implications of structural changes and behavioral practices in the meat packing industry, and will increase our capability to support legal actions that require complex economic and statistical analyses. Continuous, systematic collection and analysis of data along with aggressive investigative activities are required to address these issues effectively.

To promote competition and improve market performance and confidence in the livestock and poultry sectors, the Secretary's Advisory Committee on Agricultural Concentration recommended increased monitoring and enforcement of antitrust and regulatory policy and, specifically, increased antitrust enforcement under current regulations of the P&S Act. Since anticompetitive practices are complex and often encompass broad geographic areas, investigations involving building cases for unacceptable behavior has become more difficult and resource-intensive.

The requested increase in funds for P&S Programs will allow GIPSA to conduct additional detailed investigations and analyses in selected geographic markets on a timely basis. It also will help us meet our responsibility of fostering fair and open competition, and guarding against deceptive and fraudulent practices that affect the movement and price of meat animals and meat food products.

As the industry continues to rapidly move to value-based methods of pricing, the complexity and sophistication of the packing industry's procurement and pricing methods will continue to increase. With this change also comes greater opportunity for packers to engage in unfair, unjustly discriminatory, or deceptive practices to the detriment of livestock producers. The Agency must be able to commit the necessary resources to conduct the type of complex investigations that are required to ensure the integrity of the accounting and payment to producers.

The Secretary's Advisory Committee on Agricultural Concentration also offered recommendations to address anticompetitive practices in the poultry industry. In recent years, contract poultry growers have looked to USDA for help in assuring they are treated fairly when dealing with large, integrated poultry companies. The Committee recommended that the Secretary be provided the same administrative enforcement authority for poultry as currently exists for red meat to protect contract poultry growers from unfair and discriminatory practices.

The increase of \$750,000 for poultry compliance will allow GIPSA to operate on other than a complaint-driven basis and permit increased compliance investigations into the poultry industry. More in-depth investigations will increase the Agency's ability to identify or address practices in the industry that may be unfair, unjustly discriminatory, or deceptive before practices escalate.

Finally, as in previous years, the fiscal year 1998 budget proposes legislation to authorize the collection of license fees to administer all activities under the P&S Act. In fiscal year 1998, funds would be available only to the extent provided in advance in appropriations acts. All meat packers, live poultry dealers, stockyard owners, market agencies, and dealers, as defined in the P&S Act, would be subject to the license fees. Also included is a request to provide for a legislative proposal regarding a statutory dealer trust to require livestock inventories and accounts receivable due from the sale of livestock to be held in trust for unpaid cash sellers when a dealer fails to pay for livestock. If the user fee legislation is enacted, the cost of administering this provision would be recovered through license fees.

CONCLUSION

Mr. Chairman, this concludes my statement. I appreciate the opportunity to testify on behalf of one of USDA's newest agencies. I will be happy to answer any questions the Committee may have.

INTRODUCTION OF WITNESS

Senator COCHRAN. Before proceeding with questions of you or your colleagues who administer these programs, I am going to call on Thomas Billy for his statement as well. I know that the Under Secretary's position is vacant. Mike Taylor was in that job and now

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is no longer with the Department I understand. I assume you have been elevated to be Acting Under Secretary, or at least you do not have a boss here. You are the head man. Right? [Laughter.]

Mr. BILLY. Yes, sir.

Senator COCHRAN. And you have an equal footing—and I want everybody to understand that—with the marketing and regulatory programs. We consider that to be the case anyway.

So, I am going to ask you to proceed with any comments or statements that you have about the budget for the Food Safety and Inspection Service, Mr. Billy, and then we will have a chance to have questions on all these subjects. Please proceed.

STATEMENT OF THOMAS J. BILLY

Mr. BILLY. Thank you, Mr. Chairman, and members of the subcommittee.

I am pleased to appear before you today to discuss the President's fiscal year 1998 budget request for the Food Safety and Inspection Service. I request that my full statement be entered into the record.

Senator COCHRAN. Without objection, it is so ordered.

Mr. BILLY. Thank you very much.

As you may know, I became the Administrator of the Food Safety and Inspection Service in October 1996, after serving as the Associate Administrator for 2 years.

FOOD SAFETY PARTNERSHIP

During my years as a public servant, I have become convinced that the only way we can serve the American public is through partnerships. I believe that the Congress and FSIS are partners, striving toward the same results: safer food and a more efficient use of the taxpayers' dollars. I wish to acknowledge your role in supporting the 1997 budget request, and making an essential contribution to fulfilling our Federal responsibilities in food safety.

Now, I want to tell you very briefly about our role in the partnership during the last year, and how we plan to continue to fulfill our responsibilities. I will talk briefly about the progress we are making because of the partnerships we have formed with key constituencies, including consumers, the regulated industry, and our own employees.

FUNDAMENTAL CHANGES IN FSIS

In the last 2 years, FSIS has been working toward two goals: to make food safer by finding better ways to control pathogens and to make better use of our resources. We recognize that the agency would have to change its reliance on the traditional command-and-control method of doing business and that this would require a fundamental cultural change within the agency. Our employees and all of our constituencies would have to be part of that change and, more important, have a role in determining the nature of the changes and the methods for their implementation. In short, we had to form partnerships and work in a more open environment to make the needed changes.

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During fiscal year 1996, we set in motion a public process for determining what changes are needed. The product of that effort is a comprehensive food safety strategy. We have already begun making changes and will continue implementing them into the next century. I would like to briefly describe a few of those key changes and what they mean to the agency and to the American public.

PATHOGEN REDUCTION AND HACCP

The agency reached a milestone last July with publication of the final rule on pathogen reduction and the hazard analysis and critical control point system, known as HACCP, which will directly target and systematically reduce harmful bacteria on raw products, as well as other likely hazards. It will equip FSIS inspection personnel with the scientific and regulatory tools they need to ensure that slaughter establishments meet specific standards, and that we will reinforce all of the plants' responsibilities in terms of producing a safe product.

We began implementation of the rule a little more than a month ago. On January 27 of this year, all plants had to have plant-specific sanitation standard operating procedures, or SOP's, to ensure that they are meeting their responsibility for proper sanitation of facilities, equipment, and operations. In addition, most slaughter plants were required to begin testing for generic *E. coli*, to verify process control effectiveness in preventing fecal contamination, the primary pathway for pathogenic bacteria.

Next, all plants will develop a HACCP plan. HACCP systems identify critical control points that address likely product safety hazards.

HACCP implementation will be phased in according to plant size. In recognizing the special difficulties that small plants will face, we have initiated an aggressive program to provide assistance to these small plants.

The HACCP rule established *Salmonella* performance standards for chilled carcasses and for raw ground products. Through their HACCP programs, plants will be required to achieve a prevalence for *Salmonella* contamination that is below the national baseline prevalence for each class of product. FSIS will continually sample and test to verify compliance.

Now, by January 25 of the year 2000, all provisions of the final rule will have been implemented. The final rule sets an important framework for change in FSIS, but is by no means the completion of our full strategy for change. We must now envision our food safety and consumer protection goals in a HACCP world.

FSIS REORGANIZATION

We also realized that FSIS would need a new organization to make the necessary changes to achieve our goals. In fiscal year 1996, we began implementing a sweeping reorganization that will help us carry out our regulatory responsibilities in a more scientific and efficient manner.

We are flattening and streamlining our management structures both in headquarters and in the field and consolidating four former independent field structures into one. Our new structure will accommodate the agency's need to function with fewer nonfrontline

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staff. As we streamline our organization, we will increase the proportion of resources deployed to the frontline work force, that is, our food inspectors, in-plant veterinarians, our import inspectors, laboratory personnel, and compliance officers. This should allow us to handle industry growth without seeking additional inspection resources through the budget process.

I am very proud that we have reduced the number of headquarters units reporting to the Administrator from 13 to 7. At the same time, we created a new Office of Public Health and Science which will improve the public health focus of our program. It will ensure that our policies meet the performance goal of improving public health.

Over the next 2 years, we will reduce the number of field management offices from 46 to 18 district offices and a technical services center. I strongly believe that the 18 new district offices will make supervisory spans of control more manageable, and better balance the workload that we have.

A new Technical Services Center has been established, and will open in Omaha, NE, this summer.

FOOD SAFETY EDUCATION PROGRAM

We cannot operate the science-based inspection system of the future without first preparing our inspection work force for these changes. We have begun training our inspection work force to implement the new rule and started a new education program at Texas A&M University to provide in-plant inspectors with a more scientific foundation to work in a HACCP environment. The program will focus on giving a basic understanding of why food safety problems occur and why certain inspection tasks must be done rather than simply showing employees how to carry out the tasks.

We also have offered to reimburse employees for courses that they would take on their own time near their work sites in subjects such as statistics and microbiology.

REGULATORY REFORM

Another important area—we have initiated a comprehensive review of our entire set of operations to reduce costs and burden to industry and consumers without compromising public health and safety. As part of this effort, I am pleased to report that we are well underway with our efforts to eliminate a number of regulatory provisions and convert others to performance standards needed for HACCP.

In December 1995, we published an advance notice of proposed rulemaking in the Federal Register describing our regulatory reform strategy. We also invited comment on a list of regulations that may need revision to be consistent with HACCP.

Now, as a down payment, at that same time, we published three other documents: a final rule streamlining our prior approval system for labels, a proposal to cooperate more closely with the Food and Drug Administration on ingredient approvals, and a proposal to allow deviations from FSIS standards of identity and composition to produce products with reduced fat, cholesterol, and sodium.

Since then, we have published a proposal to eliminate prior approval for blueprints, equipment, and certain partial quality control

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programs, a proposal to shift from detailed command-and-control requirements in existing regulations to performance standards for certain meat and poultry products, and an advance notice of proposed rulemaking to evaluate the need for meat and poultry standards of identity and composition.

When our regulatory reform is completed, it will clarify the proper roles of Government and industry in ensuring a safe, wholesome food supply.

EMPHASIS ON PUBLIC HEALTH

We are also working with CDC and FDA in terms of public health, and we have started a new sentinel site project in cooperation with those agencies where we are looking at developing procedures to collect better information in terms of illnesses that are caused by various food products, including meat, poultry, and egg products.

PRESIDENT'S FOOD SAFETY INITIATIVE

On January 25, the President announced the administration's food safety initiative which includes an expansion of the sentinel site project into the Nation's early warning system. The current sentinel sites are an integral part of the early warning system and the President is requesting funding for FSIS, FDA, and CDC to increase the number of sites from five to eight, to better equip and link the sites, and to make available the state-of-the-art laboratory and electronic technology that is needed.

In our 1998 budget request, we are asking for additional funds to expand surveillance and population surveys to include *Campylobacter* infections in the sentinel site project.

EGG SAFETY

Another area we are emphasizing is egg safety. We are working to address the concerns you expressed in the fiscal year 1997 committee report concerning the 1991 amendment to the Egg Products Inspection Act establishing the average ambient temperature for the transportation of eggs and egg products. We are working closely with FDA to develop science-based regulatory standards for proper cooling of shell eggs and are looking at how best to implement the statutory shell egg requirements in the context of a HACCP-based farm-to-table strategy for eggs.

FOOD SAFETY BEYOND THE PLANT

As we implement the pathogen reduction and HACCP rule in inspected establishments, we have already begun exploring what is needed to improve food safety after products leave the establishments. We hear a lot from industry expressing concerns that you need to address every place on the farm-to-table continuum where hazards can develop and ensure that there are appropriate controls.

On the retail level, we recognize that the primary responsibility for overseeing food safety resides with State and local governments. We fully support the forum provided by the Conference for Food Protection for developing the best model code for State adoption,

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and we are committed to strengthening how the existing code addresses meat, poultry, and egg products. We are also committed to providing appropriate assistance to see that the Food Code is adopted nationwide by the States.

NEW TECHNOLOGY

Another area I would like to emphasize is the importance of new technology. Within FSIS through our field automation and information management [FAIM] project which you have supported, we are equipping our inspectors with computers to better allow them to communicate, access, and apply technical regulations and directives, and receive training on HACCP. The FAIM initiative supports both the agency's field reorganization and HACCP implementation.

I am pleased to say that all large plants will be covered by FAIM as of January 1998, the effective date for the HACCP rule in these establishments.

We are also using more rapid tests and automation in our laboratories to speed the availability of test results, and we are redesigning our training and continuing education programs to teach our employees to take advantage of this new technology.

We also are encouraging new technology outside the agency. During the last several years, we have approved a number of new technologies for use in plants to improve food safety, including organic acids, trisodium phosphate, and steam pasteurization. We will continue to help industry to test new technology in plants. As a result of your support in the 1997 budget, we particularly are focusing on small plants to help them adapt new technology to improve food safety and assisting these small plants in developing alternative process controls that meet HACCP standards.

1998 BUDGET REQUEST

Now, we are encouraged by the importance placed on food safety throughout USDA and support the initiatives proposed by the Agricultural Research Service for preharvest and postharvest food safety research and by the Cooperative State Research, Education, and Extension Service for grant programs to be carried out by the land grant universities.

To continue making food safety improvements and to accomplish our goals, we are making a current law request of \$591.2 million, an increase of \$17.2 million over the amount provided in 1997. This proposal includes increases of \$13.7 million for statutory pay increases, \$1.1 million for the increased costs of State inspection programs, and a net increase of \$2.4 million for program investments.

In fiscal year 1998, FSIS will continue to see progress in terms of transforming the inspection process and will make no requests for increase in staffing levels. We are requesting an increase for pay costs to maintain the current inspection staffing levels so that we can cover the slaughter lines and the processing operations, and avoid disruption in production processes.

In fiscal year 1998, FSIS proposes to build on the changes and investments we have started over the last 2 years, and I am confident that the results will improve both food safety and our efficiency.

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USER FEE PROPOSAL

Now, the administration believes that the collection of user fees is essential to the successful long-term implementation of the meat, poultry, and egg products inspection reforms. Legislation will be proposed to recover \$390 million in new user fees to pay the cost of salaries and benefits for personnel providing direct inspection services. The user fee proposal would result in the industry paying about 70 percent of the total cost of the program.

For 1998, we are requesting an appropriation of \$201 million to provide laboratory support for inspection, animal production food safety investments, investments in new inspection systems improvements, and program administration. This proposal is intended to assure that resources are available now and in the future to provide the level of inspection necessary to meet the demand for such services, including the growth in the industry, and to maintain consumer confidence, with the balanced budget also held in proper context. The overall impact of consumer prices as a result of these fees is estimated to be less than one-half cent per pound for meat and poultry production.

The Federal Government must share with industry, who derives direct benefits from inspection, the fiscal responsibility for providing services that are essential to ensuring food safety. To accomplish a balanced Federal budget, cost burdens must be shifted from taxpayers to those who benefit directly from the provided services. The food industry profits in the marketplace from the level of consumer confidence provided by Federal inspection programs. Additionally, the inspection programs provide a level playing field in maintaining standards of safety, wholesomeness, and labeling among individual industry entities competing for market advantage.

That concludes my oral statement.

PREPARED STATEMENT

Senator COCHRAN. Thank you very much, Mr. Billy. We have your complete statement, and it will be made part of the record. [The statement follows:]

PREPARED STATEMENT OF THOMAS J. BILLY

Mr. Chairman and Members of the Subcommittee, I am pleased to appear before you today to discuss the President's fiscal year 1998 budget request for the Food Safety and Inspection Service (FSIS). As you may know, I became the Administrator of FSIS in October 1996, after serving as Associate Administrator since October 1994.

During my years as a public servant, I have learned that the job of ensuring food safety involves much of government and requires multiple resources and authorities. I've seen food safety from several sides now, having worked at the National Marine Fisheries Service with its voluntary seafood inspection program, at the Food and Drug Administration, and now at FSIS. I am convinced that the only way we can serve the American public is through partnerships.

I believe also that Congress and FSIS are partners, striving toward the same results—safer food and a more efficient use of taxpayer dollars. I wish to acknowledge your role in supporting the 1997 budget request and making an essential contribution to fulfilling our Federal responsibilities in food safety. Now, I want to tell you about our role in the partnership during the last year and how we plan to continue to fulfill our responsibilities. I will also talk about the progress we are making because of partnerships with key constituencies, including consumers, the regulated industry, and our own employees.

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CURRENT INSPECTION ACTIVITIES

FSIS has a long, proud history of protecting the public health. Our mission is to ensure that the Nation's commercial supply of meat, poultry, and egg products is safe, wholesome, and accurately labeled, as required by the Federal Meat Inspection Act, the Poultry Products Inspection Act, and the Egg Products Inspection Act.

FSIS inspects approximately 5,900 plants that slaughter cattle, swine, sheep, goats, horses, chickens and turkeys, and process eggs as well as produce a wide range of processed products, including hams, sausage, stews, pizzas, and frozen dinners.

In addition to inspecting animals before and after slaughter and during processing, our inspectors provide samples to laboratories to test for the presence of chemical residues. FSIS also sets standards for a range of activities associated with the production of meat and poultry products, including the use of equipment, sanitation procedures, and product labeling.

In fiscal year 1996, our domestic inspectors examined approximately 88 billion pounds of meat and poultry and 3 billion pounds of egg products for public consumption. While the inspection of domestically produced meat, poultry, and egg products consumes the bulk of FSIS resources, FSIS also recognizes the vital importance of inspecting imported products. To ensure the safety of imported products, FSIS maintains a comprehensive system of import controls to carry out the requirements of the Federal meat, poultry, and egg products inspection laws.

This system of import controls involves two major components. The first is oversight to ensure that exporting countries have government inspection controls equivalent to those of the United States. Such countries must undergo a rigorous review process before they can become eligible to export product to the United States, and periodic in-country reviews, including on-site plant reviews, are carried out to maintain such eligibility.

The second component is the reinspection of meat and poultry products as they enter the United States. Reinspection is based on statistical sampling and verifies that the foreign country's inspection system is working. This reinspection is carried out by approximately 74 import inspectors covering some 160 active import inspection locations. In 1996, nearly 2.4 billion pounds of imported meat and poultry products were passed for entry into the United States.

FSIS provides assistance to State inspection programs and reviews those programs to ensure that they are maintaining inspection requirements at least equal to those of the Federal program.

Another part of the FSIS food safety program involves our laboratories, which provide scientific and technical support to inspection personnel through laboratory testing for chemical and antibiotic residues, microbiological contamination, pathology diagnostics, processed product composition, and economic adulteration.

FSIS currently operates three multidisciplinary laboratories to carry out food safety and composition tests. During fiscal year 1996, over 1.7 million analyses were performed on meat, poultry, and egg product samples by federally operated laboratories.

FSIS conducts compliance and enforcement activities to address situations where unsafe, unwholesome, and inaccurately labeled products have been produced or marketed. FSIS investigates cases of administrative, civil, or criminal violation of meat, poultry, and egg product regulations and works in conjunction with the USDA Office of the General Counsel and the Department of Justice to correct problems and prosecute offenders when necessary.

In fiscal year 1996, 31,099 compliance reviews were conducted. As a result of these reviews and other compliance activities, more than 22 million pounds of meat and poultry were detained for noncompliance with meat and poultry laws. Forty recalls were conducted involving over 2.3 million pounds of product. In addition, 48 convictions were obtained against firms and individuals for violations of the meat and poultry inspection laws.

FUNDAMENTAL CHANGES IN FSIS

In the last two years, FSIS has been working toward two major goals: to make food safer by finding better ways to control pathogens, and to make better use of our resources. We recognized that the Agency would have to change its reliance on our traditional command and control method of doing business and that this would require a fundamental cultural change within FSIS. Our employees and all of our constituencies would have to be part of the change and, more importantly, have a role in determining the nature of the changes and the method of their implementation. In short, we had to form partnerships and work in a more open environment to make the needed changes. During fiscal year 1996, we set in motion a public

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process for determining what changes were needed. The product of that effort is a comprehensive food safety strategy. We have already begun making changes and will continue implementing them into the next century. I'd like to describe a few of the key changes, how they came about, and what they mean for the Agency and the American people.

PATHOGEN REDUCTION AND HACCP

The traditional FSIS system of organoleptic inspection has limitations in dealing adequately with the problem of pathogenic microorganisms—harmful bacteria—on raw meat and poultry products. It cannot detect invisible bacteria such as *Salmonella*, *E. coli* O157:H7, *Campylobacter*, and *Listeria monocytogenes*, which contribute significantly to foodborne illness in the United States.

The Agency reached a milestone last July with publication of the final rule on Pathogen Reduction and the Hazard Analysis and Critical Control Point system, known as HACCP, which will directly target and systematically reduce harmful bacteria on raw products, as well as other likely hazards. It will equip FSIS inspection personnel with the scientific and regulatory tools they need to ensure that slaughter establishments meet specific standards of food safety performance in terms of such bacteria, and will also reinforce all plants' responsibilities for safe product. Let me briefly describe the major provisions of the Pathogen Reduction and HACCP rule.

We began implementation of the rule a little more than a month ago. On January 27, all plants had to have plant-specific Sanitation Standard Operating Procedures (SOP's) to ensure that they are meeting their responsibility for proper sanitation of facilities, equipment, and operations. The written sanitation SOP's must describe the specific measures plant management will put in place to prevent direct product contamination. In addition, most slaughter plants were required to begin testing their products for generic *E. coli* as an indicator of process control effectiveness for preventing fecal contamination, the primary pathway for pathogenic bacteria.

All plants will develop a HACCP plan based on the seven principles established by the National Advisory Committee on Microbiological Criteria for Foods. HACCP systems identify critical control points that address likely product safety hazards, rather than quality or economic adulteration problems.

HACCP implementation will be phased in according to plant size. Large plants with 500 or more employees must have plans in place on January 26, 1998. For small plants with 10 to 499 employees, the implementation date is January 27, 1999. For very small plants, with fewer than 10 employees or annual sales of less than \$2.5 million, the implementation date is January 25, 2000.

In recognizing the special difficulties that small plants will face, we have initiated an aggressive program to provide assistance to these plants. We will provide a Guidebook for the preparation of HACCP Plans, a Hazards and Preventive Measures Guide, and model plans for various product categories. We have held special constituent meetings to determine what specific, tailored assistance small plants will need. FSIS is assessing those needs and developing assistance tools that are not presently available. Current plans call for demonstration projects for HACCP in small plants. Additionally, USDA's Fund for Rural America will complement FSIS efforts by providing research and extension assistance in rural communities to help small and very small plants assess and meet their training and facilities needs in order to implement HACCP.

The HACCP rule established *Salmonella* performance standards for chilled carcasses and raw ground products. Through their HACCP programs, plants will be required to achieve a prevalence of *Salmonella* contamination that is below the national baseline prevalence for each class of raw product, as reflected in the FSIS baseline surveys. FSIS will continually sample and test to verify compliance.

By January 25, 2000, all provisions of the final rule will have been implemented. The final rule sets an important framework for change in FSIS, but by no means is it the culmination of our strategy for change. We must now envision our food safety and consumer protection goals in a HACCP world.

CHANGES IN THE FSIS ORGANIZATION

We realized early on that FSIS would need a new organization to make the changes necessary to achieve our goals. In fiscal year 1996, we began implementing a sweeping reorganization that will help us carry out our regulatory responsibilities in a more scientific and efficient manner. We sought input on the changes from our constituencies and our employees at all grade levels throughout the Agency. As a result, the reorganization is based on a top-to-bottom review of the Agency's regulatory roles, resource allocations, and organizational needs.

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We are flattening and streamlining management structures both at headquarters and in the field, and consolidating four former independent field structures into one. Our new structure will accommodate the Agency's need to function with fewer non-frontline staff. As we streamline the organization, we will increase the proportion of resources deployed to the frontline work force—food inspectors, in-plant veterinarians, import inspectors, laboratory personnel, compliance officers, and first-level supervisors.

I am very proud that we reduced the number of headquarters units reporting to the administrator from 13 to 7. At the same time, we created a new Office of Public Health and Science, which will improve the public health focus of our program. It will ensure that our policies meet the performance goal of improving public health. We also created a new Office of Policy, Program Development and Evaluation which will centralize all policy and rulemaking functions in the Agency.

Over the next two years, we will reduce the number of field management offices from 46 to 18 district offices and a Technical Services Center. I strongly believe that the 18 new district offices will make supervisory spans of control more manageable and better balance the workload.

A new Technical Services Center has been established and will be opened in Omaha, Nebraska, this summer. It will provide technical expertise and guidance to inspection personnel on the interpretation, enforcement, and application of domestic and import regulations, policies, and systems. We expect that the Center will enable FSIS to provide much quicker technical assistance and far more consistency in inspection across the country.

REGULATORY REFORM

FSIS is committed to comprehensive regulatory review of our entire operations to reduce cost and burden to industry and consumers without compromising public health and safety. As part of this effort, I'm pleased to report that we are well underway with our efforts to convert our regulations to the performance standards needed for HACCP. In December 1995, we published an advance notice of proposed rulemaking in the Federal Register describing our regulatory reform strategy. We also invited comment on a list of FSIS regulations that may need revision to be consistent with HACCP. At the same time, we published three other documents: a final rule streamlining our prior approval system for labels; a proposal to cooperate more closely with the Food and Drug Administration on ingredient approvals; and a proposal to allow deviations from FSIS standards of identity and composition to produce products with reduced fat, cholesterol, and sodium.

Since then, we have published a proposal to eliminate prior approval for blueprints, equipment, and certain partial quality control programs; a proposal to shift from detailed command and control requirements in existing regulations to performance standards for certain meat and poultry products; and an advance notice of proposed rulemaking to evaluate the need for meat and poultry standards of identity and composition.

When our regulatory reform is completed, it will clarify the proper roles of government and industry in ensuring safe food. It will focus FSIS resources on preventing harmful bacteria and other hazards in meat and poultry products. And it will make the Agency more responsive to all our constituencies.

EMPHASIS ON PUBLIC HEALTH

Our major goal is an improvement in the safety of meat, poultry, and egg products that leads to fewer people getting sick. As you know, the Government Performance and Results Act of 1993 directs Federal agencies to measure the results of their programs in terms of societal impacts. Year after year, we have been able to tell you how many pounds of product we inspected and how many laboratory tests we conducted. What we now need to tell you is how these programs make a difference to public health.

To assess the public health impact of a modernized inspection system, FSIS began working with the Centers for Disease Control and Prevention (CDC) and the Food and Drug Administration (FDA). Past estimates of the annual incidence of foodborne illness cover a very broad range and clearly indicate the need for more accurate data, including the source and cause of the problem. Limited regional studies have clearly implicated meat and poultry as vehicles for several foodborne pathogens; however, we need more precise national data.

FSIS is working with CDC and FDA to monitor five foodborne illness "sentinel sites." These sites were established to estimate the national incidence of the major foodborne diseases and to explore what relationships may exist between specific pathogens and the types of meat, poultry, and other food products associated with

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them. On January 25, the President announced the Administration's Food Safety Initiative, which includes an expansion of the sentinel site project into the Nation's Early Warning System. The current sentinel sites are an integral part of the Early Warning System, and the President has requested funding for FSIS, FDA and CDC to increase the number of sites from five to eight, better equip and link the sites, and make available state of the art laboratory and electronic technology.

In February 1997, the sentinel sites provided FSIS with preliminary data on the occurrence of diarrheal illness in 1996 due to bacterial foodborne pathogens, including *E. coli* O157:H7, *Salmonella*, *Campylobacter*, *Yersenia*, *Listeria*, and *Vibriosis*. And through case-control studies, which are in progress, the sites will provide data to determine the proportion of culture-confirmed cases of illness due to *E. coli* O157:H7 and *Salmonella* serogroups B and D attributable to eating meat and poultry products; and through population surveys, we will learn more about how people handle and prepare food. In our 1998 budget request, we are asking for additional funds to expand surveillance and population surveys, and to include *Campylobacter* infections in the Sentinel Sites case-control study.

With sentinel site information, FSIS can review HACCP programs and, where appropriate, trigger changes to prevent future outbreaks of foodborne illness. The sites will provide critical human health information to support risk assessments to determine whether pathogen performance criteria and standards are effectively reducing the incidence of foodborne illness.

As you know, we were directed by you in the fiscal year 1997 Committee Report to report on the incidence of foodborne illness in cooperation with CDC. The report found that there were 7,259 laboratory confirmed cases of diarrheal illness in calendar year 1996 in the five sites. Also, *Campylobacter* was the most frequently isolated bacterium, with *Salmonella* second, *Shigella* third, and *E. coli* fourth. CDC will officially close its books on 1996 at the end of March and we will provide updated information to you when final figures are available.

We are continuing our nationwide baseline studies to measure the levels of pathogens that currently exist on meat and poultry products. With this and other information, we expect to know earlier in the process if a potential public health problem exists and be able to carry out risk assessments, as required.

As a regulatory agency focused on public health, we must be able to rapidly adjust our policies and procedures to new information and emerging public health risk. With our enhanced front-line capability under the new organizational structure, we will be better able not only to address immediate public health problems, but to adjust our regulatory policies and procedures as necessary.

CHANGES IN INSPECTION

With implementation of the final rule on Pathogen Reduction and HACCP, there are additional opportunities to improve the way we carry out inspection activities, to improve both food safety and allocation of resources. We believe the implementation of HACCP will permit us to make improvements in the inspection process and redeploy some of our current in-plant inspection work force both to HACCP verification tasks, and to new tasks outside of traditional in-plant settings in furtherance of our farm-to-table strategy.

I also strongly believe that the final HACCP rule will provide much greater consistency in meat and poultry inspection across the country and between meat and poultry inspection. But it will be a consistency based on a common, consistent regulatory framework. It will not be based on the command and control philosophy of the past.

We are aware that there are activities we carry out within plants as part of the inspection process that have limited value in terms of public health protection or meeting other consumer protection responsibilities. We also know that there are important public health tasks we do not carry out under the current system of inspection. We are planning demonstration projects to explore improved methods for conducting inspection, and will follow a public process to obtain input from all stakeholders.

EGG SAFETY

Egg safety is another important area that deserves our attention. One emerging issue regarding the safety of eggs relates to phage-type 4 *Salmonella enteritidis* (Se).

We are monitoring the situation, and our concerns are growing. Through reports from the CDC, we know that human illnesses caused by phage-type 4 *Salmonella enteritidis* are increasing and spreading geographically. The first human cases of

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salmonellosis due to *Salmonella enteritidis* phage-type 4 occurred in California and Texas. It has now been found in Utah and other parts of the U.S.

The good news is that studies in U.S. broilers to date have not shown an increase in Se following the detection of Sephage-type 4 in this country. We believe that the steps we are taking now to reduce Se in eggs are important regardless of the type of Se we are dealing with; but we need to take some additional steps based on information that suggests phage-type 4 Se may be an invasive infection in poultry.

We have allocated funds to perform phage-typing of Se poultry isolates taken from our pathogen reduction testing program under HACCP. As I stated earlier, FSIS will conduct a *Salmonella* testing program under HACCP. We are also considering conducting a sampling program for liquid eggs and spent hens to monitor national trends for phage-type 4 Se.

We are working to address the concerns you expressed in the fiscal year 1997 Committee Report concerning the 1991 amendment to the Egg Products Inspection Act establishing an average ambient temperature for the transportation of eggs and egg products. We plan to work closely with FDA to develop science-based regulatory standards for proper cooling of shell eggs and are looking at how best to implement the statutory shell egg requirement in the context of our HACCP-based farm-to-table food safety strategy for eggs.

In close cooperation with the Food and Drug Administration (FDA), FSIS has undertaken a number of activities to address shell egg safety. With FDA, we conducted a conference in November to receive information on temperature control interventions and verification techniques in the transportation and storage of meat, poultry, seafood, eggs and egg products. We are conducting a science-based, quantitative risk assessment for shell eggs and egg products, and are talking with industry regarding steps they might take voluntarily to address the problem of *Salmonella enteritidis*. FSIS and FDA are also considering ways to solicit information through the rule-making process on issues of comprehensive food safety in shell eggs from production to food preparation. We plan to address this issue in the same public way we have addressed meat and poultry safety over the past few years, and will base actions on available science. In addition to working on shell egg safety with FDA, we are evaluating options for proposed regulations to mandate HACCP for plants that process shell eggs.

FOOD SAFETY BEYOND THE PLANT

As we implement the Pathogen Reduction and HACCP rule in inspected establishments, we have already begun exploring what is needed to improve food safety after products leave establishments. Opportunities to improve food safety exist all along the farm-to-table chain and we have an obligation to explore how best to take advantage of these opportunities by working with other Federal, State and local regulatory agencies.

On November 22, FSIS and FDA published in the Federal Register an advanced notice of proposed rulemaking to seek input on ways to improve food safety during transportation and storage. We are seeking comment on how the Federal government should be involved in this area. The November conference we sponsored with FDA on time, temperature, and transportation identified desirable and feasible temperature control interventions and verification techniques to improve food safety.

On the retail level, we recognize that the primary responsibility for overseeing food safety resides with State and local governments. We fully support the forum provided by the Conference for Food Protection for developing the best model code for State adoption. We are committed to strengthening how the existing Code addresses the meat, poultry, and egg products. We also are committed to providing appropriate assistance to see the Food Code adopted nationwide.

CHANGES IN THE WAY WE COMMUNICATE WITH ALL CONSTITUENCIES

When we began the changes at FSIS, we knew that HACCP could greatly improve food safety by identifying and controlling hazards before products reach consumers. HACCP principles have already been proven effective. However, simply imposing a new regulatory system over the old one would never work. To be successful, the Agency had to enlist the full participation of consumers, the meat and poultry industry, and all other constituencies.

FSIS far exceeded the requirements of the Administrative Procedures Act in reaching out to involve all stakeholders in this program. In addition to normal communication channels, such as notices in the Federal Register, letters were sent to thousands of organizations representing consumers, the industry, the public health community, academia, and other Federal, State, and local agencies. The Agency held seven information briefings on the proposal throughout the country, a two-day hear-

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ing in Washington, D.C. and three Scientific and Technical Conferences. The commenters raised new issues, questioned traditional wisdom, and related personal experiences. To share the new information, FSIS held another six meetings, this time focusing on specific issues raised during the comment process, culminating in a Food Safety Forum hosted by Secretary Glickman.

FSIS made substantial changes to the proposed HACCP regulation, based on the results of this outreach effort. For instance, the "indicator organism" for testing for basic safety was changed from Salmonella to E. coli and the testing requirements were changed to be much less burdensome on small plants.

After the final rule was published in July 1996, FSIS held more than a dozen additional meetings, in Washington, D.C. and across the country, to explain how the regulation would be implemented and to explain specific aspects, as well as identify the assistance available to help small plants implement HACCP. Again, we encouraged suggestions to help us fine tune implementation of the regulation.

For FSIS, a significant achievement was the process for consensus-building among competing and sometimes combative interests and a new openness to ideas. Naturally, all FSIS constituencies did not agree on every detail of the HACCP regulation and its implementation. However, they universally praised the open process that considered all viewpoints and brought together divergent constituencies that had believed themselves forever locked in opposition. It was the first time that such a variety of FSIS constituencies discussed their differing viewpoints face to face, gaining an understanding of each others' needs and concerns. For instance, the mother of a child who died from E. coli O157:H7 after eating a hamburger talked directly to the owner of a small meat plant who questioned whether he could ever guarantee that meat was free of pathogens. A union official, a plant manager, and a consumer advocate all agreed that inspectors need more scientific training. Many constituencies have asked that FSIS continue to hold public meetings, on all aspects of the Agency's work. We will do so.

During the process, we reached out to our employees in ways that we had not tried before. Now, we are investing in our employees. We cannot operate the science-based inspection system of the future without first preparing our inspection work force for these changes. We have begun training the inspection work force to implement the new rule and started a new education program at Texas A&M University to provide in-plant inspectors with a more scientific foundation to work in a HACCP environment. The program will focus on giving a basic understanding of why food safety problems occur and why certain inspection tasks must be done, rather than simply showing employees how to carry out such tasks. In addition, we will reimburse employees for the cost of courses they take on their own time near their work sites in subjects such as statistics and microbiology.

FORMING NEW PARTNERSHIPS

We are forming new partnerships with state and other government agencies and with academia, to ensure that we have the best information on which to base policy decisions. The Sentinel Sites project that I've already discussed is one such effort.

For the past couple of years, we have been working closely with FDA and State government agencies to address food safety gaps in the transportation and retail areas.

Our new food safety research agenda was developed cooperatively by the Food Safety Research Working Group, which is composed of scientists with a broad base of expertise in food safety and public health issues from USDA, FDA, CDC, the National Institutes of Health, and the Department of Defense. The agenda recognizes that it will require the combined efforts of government, industry, and academia to meet the need for human health research. Further, we must leverage our limited animal production food safety resources with producer groups, academia, States, and other Federal agencies to identify improvement opportunities in animal production.

FSIS is publishing three notices in the *Commerce Business Daily* to indicate our intent to work with animal producers, scientists in academia and government agencies at both the Federal and State levels to develop and foster voluntary food safety measures that can reasonably be taken on the farm, through marketing channels and during pre-slaughter preparation to decrease public health hazards in animals presented for slaughter.

NEW TECHNOLOGY

New technology will play a vital role in the new FSIS, both within and outside the Agency.

Within FSIS, through the Field Automation and Information Management (FAIM) project which you have supported, we are equipping our inspection work force with

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computers to better allow them to communicate, access and apply technical regulations and directives, and receive training on HACCP. The FAIM initiative supports both the Agency's field reorganization and HACCP implementation. All large HACCP plants will be covered by FAIM as of January 1998, the effective date of the HACCP rule for these plants.

We are using more rapid tests and automation in our laboratories to speed the availability of test results, and we are redesigning our training and continuing education programs to teach our employees to take advantage of this technology.

We will encourage new technology outside of the Agency. During the last several years we have approved a number of new technologies for use in plants to improve food safety—including organic acids, trisodium phosphate, and steam pasteurization. We will continue to help the industry to test new technology in plants. As a result of your support on the 1997 Budget, we particularly are helping small plants adapt new technology to improve food safety and assisting small plants in developing alternative process controls that meet HACCP standards.

INTERNATIONAL CHANGES

Our changes in regulation extend to imported products as well. The inspection systems of foreign countries must be equivalent to the U.S. system before product can be imported into the United States. Nations wishing to export to the United States had until January 27 to advise us they would implement the January 27 provisions of the Pathogen Reduction and HACCP regulation into their inspection systems. Otherwise, their product will not be allowed entry.

Working through the Codex Alimentarius Commission, we will continue to stress the role of science in international standard-setting and actively participate in the process.

1998 BUDGET REQUEST

We are encouraged by the importance placed on food safety throughout USDA and support the initiatives proposed by the Agricultural Research Service for Pre-harvest and Post-harvest food safety research, and by the Cooperative State Research, Education, and Extension Service for grant programs to be carried out by land grant universities.

To continue making food safety improvements and to accomplish our goals, we are making a current law request of \$591.2 million—an increase of \$17.2 million over the amount provided for 1997. This proposal includes increases of \$13.7 million for statutory pay increases, \$1.1 million for the increased costs of State inspection programs, and a net increase of \$2.4 million for program investments.

In fiscal year 1998, FSIS will again continue the process of transforming the inspection process with no requested increase in staffing levels. To support our partnership with employees, we are requesting an increase for pay costs to maintain current inspection staffing levels.

In fiscal year 1998, FSIS proposes to build on the changes and investments we have begun during the last two years. I am confident that the results will improve both food safety and FSIS' efficiency. Let me describe the initiatives for program investment covered by this budget request.

1998 BUDGET INITIATIVES

Changes in the FSIS organizational structure, particularly in field support, have been driven largely by the need to operate more efficiently as we carry out our regulatory responsibilities in a more scientific manner under the HACCP regulation. The first two initiatives address the need for additional resources to facilitate completion of a streamlined field management structure and to make this new organization fully functional to manage its changing responsibilities.

We are requesting an increase of \$1,000,000 for relocation costs to complete the restructuring process. Up to 75 employees will be transferred to the new district offices and the Technical Services Center during fiscal year 1998. Due to the cost of mandatory salary increases, inflation, and relocations in fiscal year 1997, the Agency will need an increase of \$1 million to begin a two-year effort to complete the restructuring of FSIS field management.

An additional \$1,250,000 is requested to begin equipping field staff in the new district offices and Technical Services Center with upgraded automated data processing (ADP) and telecommunications technology in order to link the field, headquarters, and plants as we streamline our organizational structure. We need to maximize the productivity of a finite work force charged with managing an increased workload. As I mentioned earlier, FSIS will consolidate 46 program field offices into 18 district offices, a Technical Center and two administrative centers, with a major reduction

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in support personnel. The consolidation will continue through fiscal year 1999. In fiscal year 1998, funds are needed to provide updated ADP and telecommunications equipment to support local area network (LAN) and wide area network (WAN) capabilities.

As the importance of international trade increases, so has the workload of the Office of U.S. Codex in FSIS, which carries out government-wide responsibilities. The requested increase of \$100,000 is needed to provide for increased staffing support and to meet the USDA commitment to provide one-third of the cost for a meeting of the reactivated Codex Committee on Fresh Fruits and Vegetables, with the balance of funding for this meeting being provided by other Federal agencies.

As part of the President's Food Safety Initiative and our farm-to-table strategy, we are requesting an increase of \$565,000 to provide training in HACCP principles for State and local food regulatory officers responsible for both meat and poultry inspection and distribution and retail compliance. During the past several years, consumers have come to demand convenient and easily-prepared meat and poultry food products. This change has resulted in retail stores and restaurants using manufacturing techniques previously used only in inspected establishments. In addition, traditional processes, such as meat grinding, that were once considered "low risk" are now recognized as a "significant risk" to food safety.

We believe that the State and local officials who regulate food safety at the retail and restaurant level must receive HACCP-related training that is comparable to what our inspectors receive. The requested increase is needed to begin a two-year program to train FSIS and State food safety regulators who will then train State, county and city inspectors across approximately 3,000 government agencies.

Reflecting the emphasis we place on improving public health as we work in partnership with other agencies, we request an increase of \$500,000 to support expanded pathogen data analysis in the CDC's Food Safety Early Warning System. This initiative will enable FSIS to get a more complete picture of the incidence of foodborne illness by including data on the high priority pathogen, *Campylobacter*. CDC has shared preliminary data which indicate that *Campylobacteris* the most common foodborne pathogen and the requested increase is needed so that we can determine the impact of *Campylobacter* on public health and identify appropriate follow-up actions.

Additional savings of \$1,000,000 in non-implant field management staffing is expected to result from continued implementation of the Field Automation and Information Management (FAIM) Project.

USER FEES

The Administration believes that the collection of user fees is essential to the successful long-term implementation of meat, poultry, and egg products inspection reforms. Legislation will be proposed to recover \$390 million in new user fees to pay for the cost of salaries and benefits for personnel providing direct inspection services. The user fee proposal would result in the industry paying about 70 percent of the total cost of the program. For 1998, we are requesting an appropriation of \$201 million to provide laboratory support for inspection, animal production food safety investments, investments in new inspection system improvements designed to enhance safety and productivity, and program administration. This proposal is intended to assure that resources are available now and in the future to provide the level of inspection necessary to meet the demand for such services and maintain consumer confidence, within the balanced Federal budget context. The overall impact on consumer prices as a result of these fees would be less than one-half cent per pound of meat and poultry production.

The Federal Government must share with industry, who derives direct benefits from inspection, the fiscal responsibility for providing services that are essential to ensuring food safety. To accomplish a balanced Federal budget, cost burdens must be shifted from taxpayers to those that benefit directly from the provided services. The food industry profits in the marketplace from the level of consumer confidence provided by the Federal inspection programs. Additionally, the inspection programs provide a level playing field in maintaining standards of safety, wholesomeness and labeling among individual industry entities competing for market advantage.

CONCLUSION

Mr. Chairman, this concludes my prepared statement. Thank you for the opportunity to testify on how FSIS is meeting its responsibilities in the partnership that we have with Congress to improve the safety of meat, poultry, and egg products, and thereby reduce the incidence of foodborne illness. I will be happy to answer any questions that you or other members of the Subcommittee may have.

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FISCAL YEAR 1996 FUNDS FOR IN-PLANT INSPECTION

Senator COCHRAN. Mr. Billy, there was one thing that I wanted to ask you at the outset, and then I will yield to my colleagues for any questions that they have.

The Omnibus Consolidated Rescissions and Appropriations Act of 1996 made \$363 million available for salaries and benefits of in-plant inspection personnel, unless the Secretary certified to the House and Senate Appropriations Committees that a lesser amount would be adequate to fully meet in-plant inspection requirements for the fiscal year.

A letter was received from the Secretary on January 2, 1997, saying that the FSIS had spent \$354 million of the 1996 appropriation on the salaries and benefits of its inspection work force, and that "the employment adjustments, subsequent to the April 26, 1996, statute, enabled FSIS to avoid disruptions in inspection service for the balance of the year."

I am told that several poultry plants in the Southeast have had to shut down inspection lines due to the shortage of online inspectors, and that some of these shutdowns have resulted in the destruction of poultry.

What is meant by the statement in that letter? And, how many FSIS full-time and intermittent inspectors are on the payroll to adequately meet in-plant inspection requirements?

Mr. BILLY. Mr. Chairman, I do not have the specific information, but I would be happy to provide that for the record. Let me give you a general response.

We were committed to providing the services that are needed by slaughter plants and processing plants in terms of inspection coverage. Because of the processes of balancing expenditures in terms of the cost of salaries and benefits and at the same time making the appropriate investments that are talked about in terms of the HACCP approach and introducing the new technology into the agency, we worked very hard to maintain an appropriate balance and minimize to the maximum extent possible any impact on the plants.

So, that continues to be our goal. We are in the process of continually hiring new inspectors to replace those that choose to leave, and as a result of that, I think we are doing a good job of providing the services as required under the law.

[The information follows:]

In the first part of fiscal year 1996 in-plant inspection employment dropped and, due to recruitment difficulties, did not rebound until spring. To assist in recruitment, FSIS removed the cap on other than permanent full-time employment to cover all requests for on-line inspection, and increased permanent full-time employment. Permanent full-time employment increased from its lowest level of 7,347 in January 1996 to 7,531 at the end of September 1996. In addition, by the end of fiscal year 1996 FSIS had the full-time equivalent of 539 other than permanent full-time employees, which was an increase of 74 over fiscal year 1995.

Senator COCHRAN. Do you anticipate any shutdowns being required under the budget request that you are submitting to the committee?

Mr. BILLY. No, sir; this will enable us to provide full service to the plants as they need it.

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HACCP IMPLEMENTATION AND INSPECTION ALTERNATIVES

Senator COCHRAN. To what extent is HACCP permitting a downsizing of the inspectors that are located in the plants for individual inspections of poultry?

Mr. BILLY. Our first focus is to implement HACCP in the plants. The first wave of plants to have HACCP in place will be in January 1998. That will be a total of approximately 500 plants, the largest plants. The remainder of the roughly 5,500 plants will implement HACCP over the succeeding 2 years. So, we are really on the front edge of implementing HACCP throughout the industry.

Tied to that implementation, where the plants set up a HACCP plan and implement it and we verify that they are following their HACCP plan, we have announced our intent to publish a notice to reevaluate how we provide inspection coverage, particularly focused on slaughter plants, and through a public process so that all of the stakeholders have an opportunity to participate, explore alternative inspection strategies for meeting the mandate in the law, carcass-by-carcass inspection, and assuring that the products produced are safe and wholesome. This will all be done under the context of a HACCP approach.

Through that process, we will then implement pilot studies in various plants—already a number of plants have volunteered to participate—where we will explore alternative staffing strategies that both meet the requirements and assure that the product produced is safe and wholesome.

If in fact those pilot studies demonstrate that alternative approaches under a HACCP basis are effective, we would then propose to do a rulemaking to modify our current requirements in terms of how we approach inspection and slaughter facilities. We believe that this will result in an opportunity to free up a number of inspectors which we intend to assign in distribution areas beyond the plants. This is an area that has been emphasized by both industry and the consumer community in terms of addressing the food safety hazards beyond the slaughter and processing plants.

HACCP-BASED ASSISTANCE

Senator COCHRAN. Are you going to move into the restaurants and retail outlets or what?

Mr. BILLY. No, sir; it is unrealistic for us to consider that. There are approximately 1 million retail establishments, and they are under the jurisdiction of State and local authorities. What we think we can do is provide better technical assistance to the States in terms of how to approach what they do on a HACCP basis, develop new standards, and perhaps provide some training as well to assist the States and the local authorities in ensuring that meat, poultry, and egg products are handled effectively at the retail level.

TRANSITION TO HACCP

Senator COCHRAN. I read your statement and on page 17, I notice that you compared the final HACCP rule with the command-and-control philosophy of the past and suggested that once the rule is implemented and in place, we will have a modern, up-to-date, new regulatory framework.

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One thing that concerns me is the suggestion that you keep talking about the command-and-control philosophy of the past. It seems to me that we are still in the past in terms of the philosophy. Is that an incorrect observation?

Mr. BILLY. I think, Mr. Chairman, that we are in a period of transition. It is a fact that there exist in our rules currently a number of command-and-control type requirements that need to be modified. I outlined in my statement examples of where we are proceeding to do that and either eliminate them or shift them to performance standards.

REGULATORY REFORM

Senator COCHRAN. I hear talk about it and everybody is saying that there is change occurring, but I do not know what it is. I cannot tell from reading your statement what it is and I do not hear from out in the field what it is. We talk about this new system and that changes are being made, and your statement is evidence of what I am talking about: "We are aware that there are activities we carry out within plants as part of the inspection process that have limited value in terms of public health protection or meeting other consumer protection responsibilities."

My question is then why are you doing them?

Mr. BILLY. They reflect current and longstanding regulatory requirements that we are in the process of changing. Let me give you two examples.

One is for years the agency has required plants to submit blueprints, equipment requirements, process control plans to the agency for prior approval. We have published a proposal to eliminate those kinds of requirements.

I was struck by the comparison between my experience at the Food and Drug Administration and FSIS now where the rest of the food industry seems to be able to design and build plants and select equipment without the Government prior-approving every step that they take, and I believe we can eliminate those requirements.

The interesting thing is, when we put out the rulemaking proposal to do that, the majority of the comments we got back, primarily from the industry, say do not eliminate those requirements; we are comfortable with them. But I still believe it is the right thing to do, to stop having those kinds of command-and-control type requirements.

Another example is requirements for the production of various types of products. I will use the example of roast beef where if you look at our existing regulations, they spell out a several-step process which every plant must follow to produce that product rather than simply establishing the end result requirement. Here is the food safety requirement you have to meet. It is up to you decide how you produce this product to give the industry more flexibility.

We have similarly proposed in a proposed rule to eliminate that several-step requirement and strip that right out of the regulations so that plants have more flexibility to do it, but to assure at the same time that the food safety objective is met.

And that is the process that we are moving on to change these kinds of requirements, but we must do it through a rulemaking process. That is why I mentioned several examples in my prepared

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statement that we are proceeding through this process and we will complete it. It is important to us to eliminate those kinds of command-and-control requirements and to fundamentally rely on HACCP as the basis for addressing food safety.

Senator COCHRAN. Thank you.
Senator Bumpers.

PATHOGEN REDUCTION AND HACCP

Senator BUMPERS. Pursuing Senator Cochran's line of questioning, Mr. Billy, what percentage reduction in bacteria on a chicken carcass do you get with HACCP as opposed to the old method? I am for it. I do not mean to be offensive.

Mr. BILLY. No; I understand.

What we have proposed to do in the HACCP and pathogen reduction rule is to require with the implementation of HACCP that all plants meet the national prevalence for Salmonella.

Senator BUMPERS. What does that mean, national prevalence?

Mr. BILLY. National prevalence? Sort of the national average that the industry is now accomplishing. What that means is that those plants that are not currently performing at that level will have to improve their process control to meet that national average, if you will. That is the step that is contained in the new rule to provide for improvement in terms of the presence of Salmonella and other similar pathogens on poultry or meat products.

Senator BUMPERS. That is going to be a shifting target, is it not? Because as you implement this program between now and the year 2002?

Mr. BILLY. The year 2000.

Senator BUMPERS. The average is going to continue to climb. So, a plant that might be in compliance in 1998—because the improvement is going to continue to climb, somebody that is in compliance in 1998 may not be in compliance in the year 2000 or 2002. Do you follow the question?

Mr. BILLY. Yes, I do.

To address that question, what we are planning to do is to conduct new baseline surveys over the course of a year—you need to do it over the course of a year to get the seasonal variation—and measure, if you will the performance of the industry with the implementation of HACCP. If it looks like, in fact, what you have laid out in your scenario is the case, then we would consider whether we would propose through rulemaking to modify the performance standards we now have in place to reflect those kinds of improvements. So, that is the strategy that is contained in our new rule.

Senator BUMPERS. Well, let me ask the first question in a slightly different way. How much improvement, if you can tell me, as a percentage will we see under HACCP in the year 2002 than we experienced under the old inspection system?

Mr. BILLY. I think that we will see significant improvement because with the performance standards for Salmonella and the E. coli testing that are required in the new regulation, slaughter plants in particular for the first time will be using microbiological testing to monitor their process control. That kind of information is not available through the current inspection approach, where we are using visual inspection to monitor for fecal contamination. But

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you cannot see the bacteria, so shifting to this kind of microbiological testing regime, we think, will give us real data to show progress and show the kind of reductions that you are asking about.

I am not able to tell you what we will be able to accomplish by the year 2000. We are only now implementing this new system. There is a lot of information out there to show that HACCP works very well, and I think many in the industry are already using HACCP because of the advantages that it provides. So, I think we will see very good progress in terms of reducing the levels of pathogens on products coming out of slaughter plants.

COST OF HACCP

Senator BUMPERS. What kind of economic burden, if any, does it place on the industry to implement HACCP?

Mr. BILLY. We provided in the final rule a detailed economic cost impact analysis, and it will cost the industry several hundred million dollars to implement HACCP and pathogen reduction over the full course of the 3½-year implementation period.

Senator BUMPERS. You are talking about the implementation. Is that also true on a continuing basis? I assume it is going to cost them money to implement it, but is the cost of inspection, once it is implemented, higher than the old system as far as the industry is concerned?

Mr. BILLY. The cost of inspection? No, sir; it will not be higher.

Senator BUMPERS. It will not be higher?

Mr. BILLY. No.

Senator BUMPERS. Has the Department done any studies as to consumer confidence on the poultry industry so far as pathogens and bacteria are concerned?

Mr. BILLY. I am not aware, sir, of any such surveys. I can say this, that there was a very wide support for the final HACCP and pathogen reduction rule. Certainly those that represent the public, the consumers, have embraced it and believe that it is a very positive step forward, and have so indicated in their publications and statements. So, that is the indirect measure.

Senator BUMPERS. Does FSIS have any follow-on inspection system in mind? Are you working on anything? HACCP is not going to be pertinent—you are not going to eliminate all the bacteria.

Let me ask you this question. Under the old system, what percentage of poultry that came through a processing plant had bacteria on it?

Mr. BILLY. Well, all poultry would have bacteria on it. If you are focusing on the pathogens, the things that cause people to get sick, it depended on the type of poultry that you are talking about. Our national baseline surveys, if I recall correctly—and I will provide this for the record in detail—broilers had approximately 20 percent positives for Salmonella as an example, and for ground turkey I believe it was up around 50 percent. So, that is the number of samples that you would find positive. The analysis phase of the baseline study on whole turkeys will be completed in July 1997.

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[CLERK'S NOTE.—The information referred to will not appear in the hearing record, but is printed in the Federal Register, Vol. 61, No. 144, Thursday, July 25, 1996, pp. 38806 and 38846–38847.]

Senator BUMPERS. But you cannot tell me what studies so far show will be the case after we implement the HACCP system?

Mr. BILLY. No; there is no information like that, sir, to answer your question. That is why we are going to do the follow-on baseline surveys to develop that specific kind of information.

Senator BUMPERS. I think that is very important, otherwise we do not know what we are getting here for this cost.

Mr. BILLY. Can I add one other thing?

SENTINEL SITE SURVEY

Senator BUMPERS. Certainly.

Mr. BILLY. The sentinel site project that we have started with CDC and FDA is also going to provide us new, important information because everyone pretty much acknowledges that the traditional reporting system for illnesses associated with food products has a number of flaws in it that do not allow us to rely on it to measure such progress.

Toward that end, we are cosponsoring the sentinel sites project, where in five geographic locations around the country we are very proactively looking for illness associated with food products, and in our case those products that we regulate. The data that will be developed under that sentinel sites project will be extrapolated out to reflect the national situation. It is designed statistically to do that. It will allow us to have much better information about actual illness caused by products that we regulate.

We started this over a year ago. We are currently developing, if you will, the baseline information, and then as HACCP kicks in and the pathogen reduction performance standards, we will be able to use that system to do a very direct comparison and show the progress that we are making in terms of actual illness.

Senator BUMPERS. Do you have any doubt whatever in your mind that HACCP is going to be a major improvement?

Mr. BILLY. I have no doubt whatsoever. It will make a huge difference.

Senator BUMPERS. What was your answer to my question, do you have any follow-on system in mind. You said no?

Mr. BILLY. No.

BOLL WEEVIL

Senator BUMPERS. Shifting gears and a similar question on a separate subject and that is the boll weevil eradication. Do you have any studies to show what the profit margins have been for farmers who have had the boll weevil eradicated in their States as compared to those that have not?

I am sorry. Mr. Medley, that is your question.

Mr. MEDLEY. The Cotton Council and grower foundations have acquired information about improved cotton yields and reduced production costs on over 4 million successfully eradicated acres. The rate of return on funds invested in boll weevil eradication is estimated to be at least \$12 for every \$1 in program cost.

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Senator BUMPERS. Mr. Medley, in your budget justification, here is what you say. "Two separate economic studies indicate that once boll weevil eradication is accomplished, there is an estimated yield increase of at least 69 pounds per acre, pesticide savings of \$30 per acre, and land value increases of \$14 per acre."

That is a lot of money.

Mr. MEDLEY. Yes, it is, Senator.

Senator BUMPERS. So, you have done a study to verify this?

Mr. MEDLEY. Yes; starting with our successful eradication in the Carolinas, we have been able to track over the years, not only the increase in acres planted and yield from successful eradication, but the significant profits that you referred to as well. There are increased benefits for gins and mills resulting from increased yields. The Agricultural Research Service recently published a document that verifies the economic benefits of this very successful eradication program.

Senator BUMPERS. I have been pretty excited about this program ever since it started and I have been anxiously awaiting it coming to Arkansas. Of course, as you know, we turned it down, and I think one of the reasons we turned it down was because of the upfront cost. The farmer has to put up 70 percent. Is that not correct?

Mr. MEDLEY. It was on a 70-30 basis for initial programs in the Southeast and Southwest. In recent expansion areas like Texas, the grower share is even higher and can be as much as 100 percent.

Senator BUMPERS. Why does it vary from State to State?

Mr. MEDLEY. We have tried to move from the 70-30 split, which had been the initial share, to where the Department only provides technical assistance to grower foundations and limited startup costs. In expansion areas like in Texas, producers are substantially bearing all the costs of the program through referendum.

Senator BUMPERS. What has been the cost per acre for most farmers as far as their participating share was concerned?

Mr. MEDLEY. In active eradication areas, producers may pay between \$10 to \$35 per acre per year. In areas where the program has been completed, producers pay \$2 to \$3 per acre per year.

Senator BUMPERS. Is that for 1 year or more?

Mr. MEDLEY. We normally consider active eradication covering a 3- or 4-year period.

Senator BUMPERS. So, you are talking about \$6 to \$8?

Mr. MEDLEY. The annual acreage assessment for growers can range from \$10 to \$35 for active eradication areas.

Senator BUMPERS. Did you mean \$2 per acre per year?

Mr. MEDLEY. The \$2 per acre per year assessment would be in posteradication areas.

Senator BUMPERS. Do you have any idea why a farmer would vote no when he is going to get an increase of 69 pounds per acre and \$14 an acre increase in the value of his land? I would like to invest in that one.

Mr. MEDLEY. Unfortunately, Senator, there have been other issues affecting this program. For example, last year because of heavy infestations of the beet armyworm, some producers felt that the eradication program, because of the use of the chemicals, reduced beneficial organisms and therefore caused a reduction in

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yield. This could have been the reason some of the producers voted no.

Senator BUMPERS. Mr. Medley, in my State the farmers generally north of I-40 I think oppose this. Those south of it would approve of it. Is there any way to redraw the regional lines for the election to allow the farmers—[Laughter.]

Mr. MEDLEY. Senator, you are probably a lot more familiar with that type of gerrymander than I am. [Laughter.]

Senator BUMPERS. Well, then does that mean you are going to turn it over to me? [Laughter.]

Mr. MEDLEY. We provide technical assistance and may provide a portion of the startup cost when growers pass a referendum.

Senator BUMPERS. As I stated in my opening questions, I think one of the reasons Arkansas turned it down was because of the up-front cost. Now, you had a loan program and all these other people have had the benefit of the loan program, but now you are terminating that. So, I think the loan program could have been sold to people as long as they could pay it back while they were getting this 69 pounds an acre more.

Mr. MEDLEY. The Farm Service Agency administers the loan program—that loan program of \$34 million was authorized for fiscal year 1997. The idea behind the loan program was to help provide funds to cover those types of up-front costs.

Senator BUMPERS. I am going to talk to my farmers. I had really been anxiously awaiting that program coming to our State and was a little dismayed about the outcome of it. But I want to talk to these people and find out really what is on their minds, and if it is the up-front costs, then I may try to, with Senator Cochran's assistance, get the loan money restored.

Mr. MEDLEY. Senator, we definitely feel that the boll weevil eradication program is an excellent example of using integrated pest management to deal with serious agricultural pests for the benefit of agriculture.

Senator BUMPERS. Mr. Chairman, I have few questions for the record that I will submit.

Senator COCHRAN. Thank you very much, Senator.

Senator Burns.

Senator BURNS. Thank you very much.

I will come down and draw your lines for you. [Laughter.]

SPOT SHORTAGES IN INSPECTION

Mr. Billy, just to give you an example of how slow I am, I listened to you very intently and I do not know any more now than I did before you started.

Senator BUMPERS. Well, that is not a very nice way to start the questions.

Senator BURNS. Well, no. I know it is not.

Did it actually happen? Did they have to shut down some plants because the inspection was running behind and there was some carcasses lost? Did that actually happen? I think that was asked.

We are going to substitute here. We are going to send in a tight end. [Laughter.]

Dr. REED. We did have some temporary spot shortages. We did have some plants that had to drop shackles and there were some

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inspector locations where so many people were out, we just could not cover them. But they were spot shortages and we generally had a plan to get people in there right away.

CURRENT USER FEE SYSTEM

Senator BURNS. OK. Being as that happened, can you tell me the difference, if any—describe the difference of the fee situation on who pays what with respect to fowl inspection and red meat inspection.

Mr. BILLY. Yes, Senator. What we are planning to do—

Senator BURNS. No; not what you are planning to do. I mean right now.

Mr. BILLY. Oh, the current fees that are charged? We currently charge overtime and holiday fees when inspectors have to work.

Senator BURNS. No, no; but I mean who pays what in a chicken plant and who pays what in a slaughter plant handling red meats. Do the taxpayers pay most of it in one and not the other, or vice versa? Or are they the same?

Mr. BILLY. It is the same set of rules that apply to both. If plants have approved shifts, a primary shift, even a secondary shift, then that is paid for by the taxpayer. If a plant has unexpected overtime where they have to keep operating to complete the processing of animals that have arrived, then that unexpected overtime is paid for through fees, and that applies equally to meat and poultry slaughter facilities.

Senator BURNS. Both of them are collected the same.

Mr. BILLY. The same way.

Senator BURNS. Both of them pay the same fee.

Mr. BILLY. Yes, sir.

Senator BURNS. I see a lot of heads out there going that way. OK. That is not the story I get, but I will accept that.

INSPECTION OF CANADIAN IMPORTS

Now, walk me through what we do with processed meats coming in from Canada. Do we have inspectors in Canadian plants?

Mr. BILLY. No, sir; we rely on the Canadian inspection system which we review periodically to verify that it is meeting our requirements in terms of our rules and procedures. Then we reinspect the product at the border to make sure that the Canadian inspection system has, in fact, worked effectively. That is done through a statistical sampling program where a certain number of shipments are sampled, examined by the inspector, and perhaps sampled for residues, and the labeling is reviewed. That system is applied not only to Canada, but to all other countries that are approved to ship product to the United States.

Senator BURNS. Now, is there another inspection?

Mr. BILLY. If the product is further processed—in other words, it goes through an import inspection station and then is shipped to a processing plant to be further processed—then that material would be considered a raw material entering that inspected establishment and would be further inspected to assure that it is wholesome and suitable for processing.

Senator BURNS. Now, I have been told—are all the trucks, are all the loads that cross, say, at Sunburst—is every truck inspected?

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Mr. BILLY. No, sir; the determination is made based on the paperwork that accompanies a shipment whether a particular shipment will be subject to anything beyond a review of the paperwork.

Senator BURNS. Who makes that determination?

Mr. BILLY. Our inspectors. Our inspectors receive instructions from an automated system that is designed statistically to ensure that an appropriate number of shipments from all the plants that are approved to ship are sampled on a continuing basis. So, it is a statistically based system.

The data that is collected, based on inspection, is fed back into the system and it could well trigger more frequent inspection of a plant if that is warranted based on the inspection results, but that would be reflected in the instructions that the inspector receives for each shipment as it comes through the border.

Senator BURNS. Who makes the decision on what box you look at and what box you do not look at?

Mr. BILLY. It depends on what the product is. If it is carcasses, for example, we have a brandnew strategy for dealing with carcasses that come across the border. We started jointly with Canada back in 1994 to develop a revised approach for sampling carcasses.

The way it works is that we would make sure the Canadian inspectors assure that the carcasses that are put on the back of the truck are randomly picked from the whole load and are so identified. If that shipment then is subject to inspection, we would look at those carcasses as the first order of business to determine whether, in fact, the carcasses meet all of our requirements. If they do not, the shipment would be refused entry into the United States. If they do, then that shipment would be cleared and shipped on for further processing.

This new system has added an additional check and balance, in that we will be routinely checking further at the point of receipt of these shipments to verify that, in fact, the entire load met the same requirements, and that will be done on an ongoing basis. So, that is a new check and balance that we have added into our inspection protocol, and we think that it will provide stronger information in terms of the effectiveness of this approach.

Now, if it is a packaged product, we would then randomly sample the packages depending on the type of product that was on a truck.

ANIMAL DAMAGE CONTROL

Senator BURNS. Mr. Medley, we are kind of concerned about another area. You have cut your ADC funds half in two, and we have got a little situation—I am going to be very provincial about this—up in Montana where coyotes are just really—we are in big trouble. You are asking the States to pick up more of that, but yet it is a Federal program that puts wolves on us. It is Federal programs that keeps off of public lands or Government-owned lands where you have a high prevalence of these predators. Then I have another question, but is there any reason why this cutback in these dollars?

Mr. MEDLEY. Senator, the proposal is to achieve a 50–50 cost share with the States in carrying out animal damage control activities. Currently, there is a disparity in the level of support that is being provided by individual States, ranging from approximately zero to 94 percent of total State program cost. This proposal is to

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have Federal contributions no more than 50 percent of total program costs for each State.

It would not impact the wolf program where specific funds were allocated to the Department as well as to Interior for carrying out that program.

In Montana, the State pays about 37 percent of the program operating costs. This proposal would reduce Federal contributions so the Montana program would become a 50-50 cost share. We would try to minimize any impact, but that is the proposal, Senator.

Senator BURNS. Well, but that is going to impact us more and more and more. I would hope, working with my chairman, that I could replace some of those dollars because we are in big trouble.

We have had two things that have been devastating to us. First, we lost our wool incentive program. It cost the taxpayer nothing. So, our numbers continue to drop. And then the coyotes are just absolutely—they are bad.

Now, there might be nothing to eat anyway because we have had a pretty good winter up there in that part of the world, so we are concerned about the ADC funds and this type of thing.

RESPONSIBILITY FOR FOOD SAFETY

We are in this mind set, Mr. Billy, of why is it that you think that the industry has more at stake in food safety than the consumer does?

Mr. BILLY. In fact, Senator, I believe that the responsibilities are shared across the whole spectrum from the producer, the slaughter plant, the processor, the distributor or the retailer, and the consumer. At each point there are responsibilities that have to be met.

It is for that reason, with respect to consumers, that we believe we need to partner with industry and others to develop a more effective approach for consumer education so that consumers can carry out their responsibilities.

When I was a young man—and I suspect this was true with you as well—I took a home economics class in junior high school to learn the basics about food safety and how to prepare and store foods. That has fallen by the wayside, and as a result, we have got young people coming out of school that do not begin to understand their basic responsibilities for food safety.

I think that is costing our Nation. I think we need to find a way to change that and to better equip the consumers to carry out their responsibilities. So, it does not all fall on one. I think it is a shared responsibility across the board.

Senator BURNS. I am glad to hear you say it. Now, I didn't take home economics. Maybe I should have. But I am glad to hear you say that. I wish everybody would go around here and start putting these back in schools.

Mr. BILLY. I agree.

Senator BURNS. We got another hearing going on right down here. It is the AmeriCorps, volunteers do something for America. Of course, they only cost you \$28,000 for them to volunteer. That is a hell of a volunteer.

You are right. It is passe. Everybody thinks that that is kind of—that was old days. FFA, that is old days. The 4-H is old days. And

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those are things that are ingredients that really made this country tick. Yet, you go around to these grey poupon and white wine parties and if you want to talk about weeds or home economics, you are going to be standing there talking by yourself. So, I am certainly glad to hear you say something about it.

I want to work with you on your fees because I think the consumers of America have as much at stake in food safety as the producer does because I think the producer basically tries to do a good job.

Mr. BILLY. I agree.

Senator BURNS. He loses control of that, however, when that last whatever walks off the back of the truck. He loses all control. He is completely in the hands of somebody else, but yet if something happens down the line, he is the one that takes the lick. And that is just plain, simple American, good old agriculture kind of philosophy, and it has always been that way.

And I do not know how you change it, but I say—and I still say—that the second thing we do everybody in this room—the second thing we do every day after we get up is eat. I do not know the first thing you do. You got a lot of options. [Laughter.]

But the second thing you do is eat. I think they have as much at stake that they are getting a food product that is, one, nutritious and, one, that it is safe.

I would concur with all of us here. That is basically why I am very supportive of this panel and what they do, but I am very concerned about are we sometimes being penny-wise and dollar-dumb in some of our investments. So, I would hope that we could work with the chairman and maybe move some dollars around and get it done.

But basically I think you do a good job.

The Canadian thing I do not think you allayed many fears with our people in Montana when your people were up there. We are going to have a hearing up there, as you well know. That is to allow your people to present what we are planning to do as far as inspection that make sure that the people north of that border—now, you have never been involved in border wars like we are in Montana. You got to remember, we got 200 to 300 loads of cattle coming across that border every day plus processed stuff, and now they love to market their grain down here.

We have a hell of a time moving anything north. One time we could not get in there because our wheelbase on our tractors was too long. We could not get across the border to market our product, and yet we are supposed to have a Free Trade Agreement. Now, that is not right.

So, that is all the questions I have. I just look forward to working with you and on these budgets to make sure that we put the dollars where they need to be put because our problems are not like the problems that they have in Mississippi. We do not want to step on the problems and not address the problems they have in Mississippi, but on the other hand, we want to solve some of ours too and make sure that we look at this in an equitable manner.

I get a big kick. We are all down there looking and sending emergency dollars down South on them floods now. We are going to lose a half a million head of cattle due to this winter in the Dakotas

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and eastern Montana. A half a million head. And there ain't nobody going to come roaring up there with any checkbook or draft book wanting to buy them carcasses whenever we start finding someplace to go with them. I will guarantee you that.

And all that water has got to come down, so you are going to get hit again, by the way. We are going to send it all down to you again as soon as the sun comes out, anyway.

So, thank you very much, Mr. Chairman. I just want to work with you to make sure that we got some equity in the budget. That is what I am concerned about.

IMPORT/EXPORT

Senator COCHRAN. Thank you, Senator Burns.

Let me ask a couple of questions about the Marketing Service. I noticed in the statement of Secretary Dunn comments about how AMS does things behind the scenes to help pave the way for the marketing of U.S. food products and commodities in overseas markets. We have been successful in many specific instances in that connection, one of which was to deal with the problem Russia raised 2 years ago, or whenever it was, with our poultry exports. They were shutting them down because of suspected problems with food safety or contamination and the like. You mentioned specifically having opened up new markets for pork products in Russia.

Tell us about both of those. Have there been any recurrent problems in connection with poultry exports? And, what did you do to help pave the way to increase access in that market for our pork products?

Mr. DUNN. Thank you, Mr. Chairman.

I am going to ask Administrator Medley to address those questions.

As you are well aware, the Russian group was over here in the United States. They did a tour with not only USDA Agricultural Marketing Service agencies but also with Farm Service agencies and FSIS to take a look at our organization. It was a joint effort on the part of the agencies at the Department of Agriculture working in cooperation with each other, and I will let Mr. Medley address what we did to assure the health of the chickens that we utilize in the poultry business.

Mr. MEDLEY. Thank you, Mr. Dunn. I will call on Mr. Billy to add information because it was a partnership among APHIS, FSIS, as well as the State veterinary services, the State veterinarians, and industry.

Mr. Chairman, Russia was raising concern about numerous poultry diseases and our ability to certify that our poultry was free of those particular diseases. We were able, with the help of industry, State, and Federal participants, to show our counterparts in Russia that we do have an overall system to certify the safety of our poultry products.

In addition to specific diseases, we clarified issues about the pathogens which cause the disease.

Very recently, we conducted a followup meeting in Russia which again focused on some of the science issues that are associated with the certification process.

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We see this, Mr. Chairman, as part of our responsibility in APHIS to facilitate exports and also to maintain markets by making sure that when sanitary/phytosanitary issues are raised, that they are legitimate and that we address them. This is what we did in this particular case. We assured our Russian counterparts that our poultry disease reporting system was adequate for us to be able to certify the health status of the poultry being exported.

Mr. BILLY. We did a similar thing, Mr. Chairman, with regard to the food safety issues that focused on Salmonella and various types of residues that could potentially be present in poultry. We were able to negotiate an arrangement, where through a minimal amount of testing, we could verify that, in fact, these were not problems in terms of meeting the Russian requirements for such products.

We were very pleased to sign that new agreement with my counterpart, Dr. Avilov, last April. As I understand it, the products have been flowing in very smoothly and effectively.

MARKET ACCESS AND TRADE PRACTICES

Senator COCHRAN. The question of how we are going to continue to ensure access to markets is always one that is on our minds. I cannot help but notice the continued trade deficits that we have in some places. Japan, for example, is almost \$50 billion I think this year. China is developing a huge trade surplus with us now.

What efforts are we making in those two markets, if any, to try to break down barriers, if any exist, in areas similar to those described in your statements where we have had success stories in the past? Are there problems that are outstanding with these two countries, and is there anything we can do about it through the agencies that are represented here today?

Mr. MEDLEY. Mr. Chairman, in fiscal year 1996 we had almost \$60 billion in agricultural exports. Our largest market, of course, was Japan, followed by Europe. In agricultural exports, we had a surplus of over \$27 billion in 1996 and we are anticipating a surplus of over \$22 billion in 1997.

To maintain and expand markets, we are making sure that any trade restrictions or requirements on trade are based only on valid, sanitary/phytosanitary conditions. We are working with the Foreign Agricultural Service as well as the U.S. Trade Representative to create a level playing field for U.S. agriculture.

It is not always easy. There are certain areas where basic phytosanitary principles have not been accepted or not fairly applied. In bilateral negotiations, we seek to correct these situations. This week, we are in bilateral negotiations with Japan to deal with certain phytosanitary issues.

Mr. DUNN. Mr. Chairman, specifically on China, just this last month we signed an agreement with a contingency of Chinese experts that were over here in the United States to take a look at how APHIS operates.

But one of the things that we have found in order for our producers and our processors and traders to be extremely knowledgeable about what is happening in the international sector is that they need the same type of information on agricultural market news

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that they have here domestically. I would ask Mr. Lon Hatamiya maybe to elaborate a bit on that.

Senator COCHRAN. Mr. Hatamiya.

Mr. HATAMIYA. Mr. Chairman, if you have seen our budget request this year, we are asking for additional funds to increase our international market news collection and dissemination. Much of that will be in the areas where you mentioned, in the Pacific Rim, in terms of China, Southeast Asia, and Japan, as well as South America where we think there are emerging markets where domestically grown products can be sold.

Another area that we are actively involved in is in standards development. We believe the U.S. standards should be used as a standard worldwide, so we are actively involved with international standards organizations to ensure that our voice is there to break down any kinds of trade barriers that may exist due to differing standards from one country to the next.

But we believe that the key to gaining access for U.S. producers to sell in these countries is to have as much information as possible so the producers can maintain their competitiveness when they try to enter into these markets, as well as to gain further access to these markets.

Senator COCHRAN. Senator Bumpers raised a question about the boll weevil loan program. We included in the fiscal year 1997 appropriations act, funding for this new loan program but nothing has happened to date. There were never any regulations issued, so none of the funds have been used. Why not?

Mr. DUNN. Mr. Chairman, the approval of that program about 5 months ago was for our Farm Service Agency to be able to give a loan program to supplement the producers to buy into the boll weevil eradication program.

The Farm Service Agency has been, in fact, working on their regulations. I met with them earlier this week to find out exactly where we were on those regulations. They have assured me that they have been completed and are in the process of completing the internal review that we have for those regulations.

I do have some concerns that it is getting late in the season and that we are losing our opportunity to use that program this year.

One of the concerns that the Farm Service Agency had was the need for an EIS or environmental assessment for their program which is required by law. What I have offered for them to do is have APHIS provide that service for them and I am guardedly optimistic that we are on track to getting that program out so that we can still utilize those funds that were appropriated, Mr. Chairman.

Senator COCHRAN. The President's budget for this next year, fiscal year 1998, proposes to terminate the boll weevil eradication loan program. Is there any additional information that you can give the committee as to why the administration is proposing to terminate it?

Mr. DUNN. I would have to defer to the Farm Service Agency folks when they are here or maybe to Mr. Kaplan on an overview.

Mr. KAPLAN. It was just due to the cap on the discretionary budget, sir, and the fact that it has not been implemented yet.

Senator COCHRAN. The President did not request a rescission of the funds or a deferral or anything like that, did he? Is this called

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impoundment? Is that not what we had the Budget Act passed for? If funds are appropriated for a program, shouldn't they be spent as the Congress and the law directs that they be spent?

Mr. KAPLAN. As Assistant Secretary Dunn said, we still hope to get the regulations out this year and make the funds available.

Senator COCHRAN. Does the Department have a view—or should we ask others when they appear before us—why USDA has stalled and why the Department may not share our view that this is a good way to accelerate the eradication of boll weevil infestations?

Mr. DUNN. I think on the contrary, Mr. Chairman, I think we do view this as a good opportunity to use those funds this year. The Farm Service Agency has established those regulations internally. I know many folks wonder what passes for work for an Assistant Secretary, and it is my responsibility to ensure that we get those out and I have to take part of the blame here. I can assure you that is on my radar screen. I have had inner-departmental meetings to get those regulations out so we can still use those funds this year.

Senator COCHRAN. Well, I appreciate hearing that, and I am encouraged by that answer, Mr. Secretary. I worry that the President's budget request is down \$9.8 million from the fiscal year 1997 appropriated level for the APHIS boll weevil eradication program and no funding is proposed for the loan program.

There are several areas that have not participated in the program. Some are having additional referenda. Senator Bumpers mentioned the situation in Arkansas. We have had a region in our State where approval has not been obtained to complete statewide coverage of the program, but I understand that the proponents are working on that and are dealing with information awareness and whatever else may be needed to complete this program.

One thing that we noticed was that in Alabama the per-acre costs were higher than in other neighboring States.

Do you have any information that you could give the committee as to why this disparity exists and what the cost differences are?

Mr. DUNN. I have asked our internal management people to take a look at that situation and to give us back a report. I have not received it at this time, Mr. Chairman.

Senator COCHRAN. When you do have it, would you give us at least some information on that subject if you have it available to you?

Mr. DUNN. Yes, sir.

AMBIENT TEMPERATURE OF EGGS

Senator COCHRAN. There is also another statute and directive on the subject of ambient temperature of eggs that regulations should have been issued on 7 years ago. I think it was 1991 when a law directed that be done, and it still has not been done as far as we can tell. This is touched on, I think, in Mr. Billy's statement to the effect that FDA and others are being asked for input into the process, and that this may get done sometime soon.

I think one of the reasons why the industry is so concerned is that you have identified some outbreaks of Salmonella. This may have been prevented if the regulations on ambient temperature

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had been developed and implemented as contemplated by the congressional directives.

What is going on here? What is the problem?

Mr. BILLY. Mr. Chairman, the specific requirements that are contained in that amendment would have us establish a requirement that vehicles that convey eggs to the marketplace meet an average ambient temperature of 45 degrees. When the Department started to develop regulations to implement that provision, it became clear, based on the comments received, that there were several problems with that approach.

First, that approach would have a very high impact on the small companies that transport eggs to market because of the cost involved in implementing that provision. So, there was a concern about the cost impact in particular on small operators.

Second, there were concerns about how you would enforce such a requirement because if you open the truck to take samples, depending on when you would check that temperature, you could have a problem with what the ambient temperature is in the back of the truck, and not necessarily have it reflect what the temperature of the eggs were, and whether they were, in fact, being cooled down below the temperature at which pathogens can grow and multiply.

Finally, there was no provision for looking at the continuum of when eggs are first laid and then washed and put into cartons, and then as they move through the process of distribution to the marketplace. You could have that provision met, yet have temperatures in the eggs because of how they are handled prior to distribution where the temperature was high and would not be lowered significantly during transportation. That provision does not specifically target the question of temperature in the sense of getting the temperature down so that pathogens cannot grow and multiply if they are present.

The approach that we are taking is to look at that continuum in terms of when the eggs are laid, how they are handled at that stage, so that we can, in fact, properly manage the combination of time and temperature. The temperature is brought down in a consistent manner to meet the requirements of how the eggs are shipped and sold at retail. So, we think a more comprehensive approach that focuses on the temperature of the eggs rather than the temperature of the vehicle in which they are being transported will net us a better result in terms of egg safety.

We are doing a risk assessment, as required, to look at that continuum and identify what the most effective approach from both the public health and cost point of view would be in terms of dealing with that issue. In the meantime, we have encouraged the industry, those that have the means, to meet that requirement. To the extent that it does provide some margin of positive impact, we welcome that and we are encouraging that. But we think our approach will be more comprehensive and focus in particular on the eggs in terms of getting their temperature down to assure that any pathogens present are not multiplying on the way to the marketplace.

Senator COCHRAN. Were the recent HACCP regulations designed to cover shell eggs?

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Mr. BILLY. No, sir; we are approaching that on a separate rule-making basis jointly with FDA because they have responsibility for shell egg safety, except for this one provision on the transportation of shell eggs to market, which is a requirement that USDA must address.

Senator COCHRAN. Do you intend to mandate HACCP for plants that process shell eggs?

Mr. BILLY. Yes; we believe that that is an appropriate step that would accomplish two or three things.

One, we think that it will allow us again to modify our inspection approach to focus on the key control measures that are critical from the point of view of the safety of egg products. We have talked to the industry and they seem to be very supportive of that kind of a transition to a HACCP-type approach. In fact, we have received a petition that would encourage us to move forward in terms of a HACCP-type approach for egg products.

HACCP FOR EGG PRODUCTS

Senator COCHRAN. This may be too big of a question for this hearing, and if it is, I will be glad to entertain your suggestion that it be submitted for the record.

What are your options for proposed regulations under HACCP?

Mr. BILLY. Well, we think that we can have several approaches considered. One perhaps would be to look at whether we could do it on a voluntary basis. If there is very strong interest and commitment from the industry, perhaps we can approach this on a voluntary basis and end up with the same kind of result that would be otherwise the case if we chose a mandatory approach.

We also need to look at whether HACCP is needed for all types of egg products. It may be the case with certain types of products that you do not need to take that step in terms of assuring the safety of the product.

Then we need to carefully look at the timing, the phase-in, and what we would discontinue doing in terms of our current continuous inspection approach.

So, there are different ways of implementing such a new requirement that would minimize the cost impact and any disruption, but at the same time properly address the safety of egg products.

Senator COCHRAN. Thank you very much.

I do not want the Grain Inspection Service to think that we have forgotten about you over there.

Mr. BAKER. I did not think you had.

PACKER CONCENTRATION

Senator COCHRAN. There is one area that I wanted to touch on. The Secretary may want to comment, of course, and certainly we would appreciate his doing so if he wants to.

The budget proposes an increase of \$2.3 million for the Grain Inspection, Packers and Stockyards Administration to carry out recommendations of the Advisory Committee on Concentration. There has been a good deal of speculation and concern that prices being paid to producers were low because we had just a few big packers and stockyards. The producers and the beef cattle farmers and

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ranchers were suffering as a result of that, and there were some recommendations made.

How are you going to spend that money? What are you going to do with the \$2.3 million in additional funds and what activities are going to be carried out?

Mr. DUNN. Mr. Chairman, I will lead off while Mr. Baker collects his thoughts on that.

This has been one of Secretary Glickman's highest priorities since he has become Secretary of Agriculture. He initially started off, went around the country, and had town meetings. He heard over and over again that concentration was a big issue of great concern by all segments of the agriculture industry.

As a result, he put together an advisory committee made up of 21 members, and they have given us some 68 recommendations of things that they would like us to do.

We have asked the Office of Inspector General, in fact, to take a look at packers and stockyards to see if we have the right mix, the right makeup, the proper people there, and are we going about the investigations as we ought to to ensure that we can address these concentration issues.

We are going to be in the future taking a look at increasing some economists to do an econometric model of what the industry ought to look like, increase some legal staff to give us some better insight of how we go about gathering information, working closer with the Office of General Counsel to ensure that we go through and get some better convictions or a better record on our convictions.

Now, specifically on the dollar amount we have requested, I will let Mr. Baker respond to that.

Mr. BAKER. Mr. Chairman, approximately one-third of that is money that is being requested in the poultry area where our agency can gear up to better evaluate and better investigate contract poultry production dealing with large, complex integrators and poultry people. That is basically one-third of it.

The other two-thirds is in refocusing our efforts in the procurement of packers and the complex industry that is out there. We do, I think, an excellent job in dealing with the average-type cases that are brought before P&S and all, but the big anticompetitive cases that we are presently involved in are requiring tremendous resources that are not available to us. For us to gear up and get into that picture, we have got to have more money. This is the third year we have asked for it. Maybe the third year is the charm, and we sure need more money.

MARKET REPORTING

Senator COCHRAN. AMS also has \$500,000 requested to carry out the findings of that committee. How are you going to use that, Mr. Hatamiya?

Mr. HATAMIYA. Mr. Chairman, there are a number of proposals we are putting together, but primarily they are in the area of market information and collection. From the advisory committee's report, there was a need for more value-based information both at the cattle, hogs, sheep, at all levels where concentration exists.

What we are going to do is try to implement the \$500,000 we are requesting to better report prices and to do it in a matrix format

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where the value reporting will give some essential understanding across geographic regions. We are also adding people at auction markets for direct coverage of daily trading to better reflect contract pricing.

So, there are a number of issues in all of these areas where we think we can better cover markets and revise what we have been doing in the past to produce information that is more usable for the producer in this day and age. With the changes in international trade, we think it is also important to have a better basis for what we are reporting.

Senator COCHRAN. I appreciate very much the cooperation that you all have given to our subcommittee. You have been patient with our questions and our requests for information to help us better understand the budget request and its implications for the agriculture and food industries and for consumers, who I guess have the most to lose of anybody if we have a contaminated food supply.

My impression from what I have heard today and also just as general information that is available to the public is that we have the safest food supply in the world. We have a system that is probably more intense, in terms of the concentration of effort, science and energy, to help assure the safety of the food supply than that of any country in the world.

I think we can all take pride in that. We have worked very hard over a long period of years, and our predecessors in these jobs have as well, to help achieve these goals. So, we take it very seriously here in the Senate and we know the agencies of the Department of Agriculture, who are all represented here today, do as well. So, for that good effort, I want to personally commend you all.

SUBMITTED QUESTIONS

I thank you all again for being here and for your testimony. The additional questions that we will submit we hope will be answered in a timely fashion, for which we will be very grateful.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

FOOD SAFETY AND INSPECTION SERVICE

QUESTIONS SUBMITTED BY SENATOR COCHRAN

FSIS COMPUTER TECHNOLOGY INVESTMENTS

The President's budget requests an increase of \$1.25 million to upgrade automated data processing (ADP) and technology in support of the Agency's computer technology enhancements. USDA has not implemented agency-wide architecture by February 1, as Deputy Secretary Rominger stated in his November 12 letter. The agency has not even completed the strategic planning necessary to identify and understand its core business processes.

Question. FSIS has stated that funds are necessary in fiscal year 1998 to provide ADP and telecommunications equipment which are currently not available. Has FSIS constructed a strategic plan that coordinates with USDA's overall plan?

Answer. FSIS conducts an ongoing long-range planning process for information resource management (IRM) to maximize the use of information technology (IT) in facilitating and supporting our agency's program mission, and to improve the availability, quality, management and use of information throughout FSIS. FSIS updates its IT Long-Range Plan annually to ensure compliance with the overall USDA IT architecture.

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FSIS has contributed several staff members to work with the Department on USDA's Information Technology (IT) Architecture. By working with USDA on the overall IT structure, we are very confident that FSIS plans are compliant with the USDA IT architecture. FSIS actively supports and serves on the USDA IRM Council Board, the IRM Planning Sub-Council, the Data Administration Sub-Council and the Telecommunications Sub-Council. The agency fully participates in the ongoing USDA IRM modernization initiative, which addresses prioritized action items selected by the USDA IRM Council Board on the basis of the recommendations identified in the USDA IRM Modernization Report.

Question. If USDA has not implemented the agency-wide architecture or completed the strategic planning, then is FSIS limited in its ability to move forward?

Answer. In January, FSIS requested and received an IT waiver from USDA to conduct computer acquisitions for the Field Automation and Information Management (FAIM) project. The waiver enables FSIS to continue implementation of the FAIM project through the purchase of desktop and notebook computers for use by FSIS inspection personnel. As a result of this waiver, FSIS is able to move forward with providing the necessary infrastructure to support the FSIS field reorganization and new inspection methodologies, such as HACCP.

USDA continues to develop information architecture, its Enterprise Network. Telecommunications is part of information architecture and is included in the USDA-wide Enterprise Network. FSIS has submitted its inventory forecast needs and a Telecommunications Management Plan to the Department for review. We have every expectation of approval and implementation within the time frames specified.

Question. Is this subject to the Department's moratorium on new computer system investments?

Answer. The requested increase of \$1.25 million for upgraded automated data processing (ADP) and telecommunications technology would be subject to the Department's moratorium, based on the agency's experience with FAIM in fiscal year 1997. However, we would expect to request a waiver, based on a similar justification for FAIM, that the requested equipment purchases are essential to implementation of the field reorganization.

Question. How much has been invested in the Field Automation and Information Management (FAIM) project to date (please indicate by fiscal year).

Answer. Direct FAIM obligations total \$9.75 million through January 1997. This includes hardware, software, supplies, maintenance, travel for trainees to the training center at Texas A&M University, training, contracting, and associated telecommunications costs. In addition, there are agency costs that are identified as part of the OMB Circular A-11 Exhibit 43 on Information Technology. For example, the FAIM staff receives programming assistance for FAIM applications from others within the agency, for which FAIM has identified the staff years as part of the system life-cycle, and which are included in the Exhibit 43 under "Personnel work-years."

[The information follows:]

<i>Fiscal year</i>	<i>Cost</i>
1996 ¹	\$7,230,000
1997 through January 31, 1997	2,520,000
Total obligations	9,750,000

¹Of the total \$8.4 million appropriated, \$1.2 million was "carried over" into fiscal year 1997 for the purchase of a new hardware/software platform.

Question. What is the total cost of this system?

Answer. Through fiscal year 1997, the cost for FAIM is \$16.95 million. An additional \$8.5 million is requested for fiscal year 1998, the third year of the five year FAIM project.

FSIS EMPLOYEE RELOCATION COSTS

The fiscal year 1998 budget requests \$1 million for relocation costs of FSIS employees.

Question. What is the status of the FSIS centralized administrative offices located in Minneapolis, Minnesota and Urbandale, Iowa?

Answer. All field personnel functions are being consolidated in Minneapolis, MN, which is the site of an existing field personnel office. Consolidation is expected to be completed by the end of fiscal year 1997 and the office will be fully staffed to manage personnel functions, including hiring, merit promotions, lateral reassignments, and work reductions.

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The Financial Processing Center in Urbandale, Iowa opened at the end of September 1996 and expects to complete consolidation of field finance functions by the end of fiscal year 1997, including pay, the collection of revenues from reimbursements and trust funds, and processing of payments for travel.

Question. What is the status and location of the new district offices?

Answer. The new district offices are currently being established and will begin operating with core staff by June 1997. The location of these offices are as follows: Alameda, CA; Salem, OR; Boulder, CO; Minneapolis, MN; Lawrence, KS; Springdale, AR; Dallas, TX; Madison, WI; Chicago, IL; Pickerington, OH; Philadelphia, PA; Albany, NY; Boston, MA; Greenbelt, MD; Raleigh, NC; Des Moines, IA; Atlanta, GA and Jackson, MS.

Question. On what basis was a site selected for the Technical Services Center?

Answer. An FSIS committee scored and ranked each site considered based on a number of criteria, including space availability and cost, labor market conditions, and air service. For the six cities that best met these criteria, both first year and ten year costs were compared, and there was not a significant difference on the cost amortized over ten years.

Consideration then was given to additional characteristics of the sites, including: time zone that facilitates nationwide contacts; a rural agricultural community surrounding; population levels in terms of the impact of FSIS employment; advantages offered by site representatives such as financial and family relocation services; and immediate availability of suitable office space facilities.

In reviewing the top sites based upon these factors, Omaha, NE was selected because it offers several advantages. It is a mid-size city in the Central Time Zone with a rural agricultural community surrounding. In addition, Omaha offered a three year supplement of \$300,000 each year to offset costs to the Federal Government. The city provides family relocation services in conjunction with those provided by FSIS, and has identified several office buildings with suitable space available for occupancy consistent with FSIS time frames.

Question. Will \$1 million be adequate for the relocation of employees beginning in fiscal year 1997 and completing the relocation by the end of fiscal year 1999? If not, how much do you project will be needed for fiscal year 1998 and fiscal year 1999?

Answer. An increase of \$1 million in fiscal year 1998, to be continued in fiscal year 1999, is needed to complete relocation of positions to the district offices, technical services center, and centralized administrative offices. The requested increase will provide sufficient funds to complete the relocation through fiscal year 1999.

Question. What is the total net savings from FSIS field management streamlining once this process is completed?

Answer. From fiscal year 1995 through fiscal year 1997, FSIS will have met targets for streamlining and administrative cost reductions that total nearly \$11 million and more than 300 staff years. Implementation of the agency reorganization to consolidate field management will enable FSIS to manage within this reduced level of staffing and funding levels.

HACCP

1. The President's budget requests \$565,000 to provide Hazard Analysis and Critical Control Point (HAACP) training to state and local food regulatory officers.

Question. Will restaurants and retail stores be required to implement HACCP in the future?

Answer. FSIS and FDA have no plans to impose HACCP requirements on restaurants or retail stores. Nonetheless, the federal agencies are encouraging all who process food commercially to adopt HACCP voluntarily because it is a rational, effective, and universally applicable method for assuring the safety of processed foods.

Question. What is the Administration's position on merging state and federal meat inspection so meat inspected by state agencies can be sold across state lines?

Answer. USDA is not philosophically opposed to interstate shipment of state inspected products and is ready to address the concerns of state inspected plants and State Departments of Agriculture underlying this issue. However, it is not ready to endorse the "merging" of state and federal inspection or other specific solutions proposed for those concerns without further analysis of the issues. USDA has committed to holding public meetings on this issue June 16 and 17, 1997, in Sioux Falls, South Dakota, and on July 8, 1997, in Washington, DC, to get more information and provide a record upon which it can base a full analysis of its policy options.

USDA is very concerned that state inspected processors wishing to distribute their product across state lines view the obtaining of federal inspection to be an unreasonable obstacle in their path, and would consider changes in how FSIS grants federal

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inspection to such plants if warranted. Similarly, USDA views state inspection programs as an essential part of the nation's food safety network, and is open to new ideas on how to better support them and keep them viable. The Department wants to have the best possible working relationship with state meat and poultry inspection programs and the establishments they inspect.

Any additional major changes in USDA's inspection program, on top of major organizational changes already underway within FSIS, would divert USDA resources from implementing HACCP and pathogen reduction requirements, and could lead to delays in these risk reduction efforts. That is, the public benefits of instituting such changes at this juncture should be carefully weighed against the public costs.

2. When do you plan to have all the HACCP regulatory reforms in place and completed?

Answer. The target for completing all HACCP regulatory reforms is 1999.

3. It is my understanding that FSIS is considering publishing on the Internet and through other media the results of the agency's Salmonella testing of meat and poultry processing establishments.

Question. Is FSIS considering publishing the agency's Salmonella testing of meat and poultry processing establishments on the Internet?

Answer. Last fall, during public meetings explaining the regulatory provisions of FSIS' HACCP final rule, Agency officials indicated that the Agency was considering publication of Salmonella test results on the Internet. Since those public meetings, FSIS has received oral and written correspondence from interested parties expressing concern over the Agency's intention to make the test results available on the Internet. In response to this interest, FSIS is holding a public meeting March 6, 1997, to hear these concerns and to receive public input on the best method for making the test results available.

Question. Is this data you are publishing intermediate results?

Answer. The data under consideration for publication includes pre-implementation and compliance results.

Question. If so, how can you justify publishing this information?

Answer. FSIS will collect samples from meat and poultry establishments prior to the scheduled date for HACCP implementation for that group of plants. The test results from these pre-implementation samples are intended to provide information on what FSIS needs to know in order to effectively administer and enforce the regulation; what individual establishments need to know about their present level of compliance with the Salmonella performance standards in order to develop HACCP plans that ensure that products meet those pathogen reduction performance standards; and what FSIS, the industry, and the general public need to know about Salmonella levels at the starting point for the new system of regulating meat and poultry products. Information gathered on Salmonella testing is subject to release under the Freedom of Information Act. The possible publication of data on the Internet would facilitate the general public's ability to know about Salmonella levels at the starting point for the new system of regulating meat and poultry. On the other hand, very legitimate concerns were raised about the improper use of such available data, particularly by foreign interests and foreign markets. We expect to make a decision in mid 1997.

Question. Will it lead to any enforcement action?

Answer. The data collected during the pre-implementation period will not lead to enforcement action. Once the effective date for compliance with the Salmonella performance standards has occurred for a given group of plants, the test results of sample analysis of product from those plants may lead to enforcement action, if the plant's test results reflect that it is not complying with the pathogen reduction performance standard. It should be noted that data associated with a regulatory case is withheld, pending a final outcome.

Question. Will this lead consumers and prospective international customers into believing that the U.S. products tested are unsafe or unwholesome?

Answer. FSIS has conducted Salmonella testing on ready-to-eat products for many years. Testing on ready-to-eat products has been on a product acceptance basis, meaning that the test results do signify whether the products are wholesome and safe for consumption. The presence of any pathogen in ready-to-eat products indicates that the food production process is out of control and the product produced under the process is adulterated. FSIS works with industry to recall ready-to-eat products contaminated with human pathogens to protect the public health.

This is not true, however, with Salmonella testing on carcasses and raw ground products. FSIS' Salmonella testing program on carcasses and raw ground products serves to verify the effectiveness of establishment process control activities in reducing pathogen levels on raw products. The test results from this program are not used for product acceptance purposes. FSIS is aware that the objectives of this test-

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ing program are different than those of testing programs on ready-to-eat products. For that reason, FSIS intends to provide explanatory information with the release of test results to insure that consumers and international customers understand that positive findings of Salmonella on raw products are not an indication of unsafe or unwholesome product.

IN-PLANT INSPECTION PERSONNEL

1. HACCP is to be implemented in increments through year 2000. As HACCP becomes the inspection system in all plants, in-plant inspectors will no longer be needed.

Question. Is this correct?

Answer. No. In-plant inspection will be required under HACCP. Implementation of HACCP is not a means to reduce the size of, or eliminate the need for, in-plant inspectors. Under HACCP, inspectors will be needed both within and beyond slaughter and processing plants as FSIS broadens the scope of food safety activities. FSIS is requiring HACCP, along with pathogen reduction, and Sanitation Standard Operating Procedures (SOPs), to improve food safety and begin the long-awaited modernization of USDA's meat and poultry inspection system. FSIS expects this combination of HACCP-based process control, microbial testing, pathogen reduction performance standards, and sanitation SOPs to significantly reduce contamination of meat and poultry with harmful bacteria and reduce the risk of foodborne illness. FSIS's non-safety regulatory responsibilities for wholesomeness, product integrity and labeling under the laws will continue to require inspection activity in plants.

Question. Explain how personnel will be altered through year 2000 as the current inspection system is replaced by the HACCP system.

Answer. Implementation of the final rule on HACCP and Pathogen Reduction systems will result in far-reaching changes in the respective roles of industry and FSIS inspection personnel in assuring the public a meat and poultry supply that meets appropriate sanitation and safety standards and is not adulterated or misbranded. The Pathogen Reduction and HACCP systems rule represents a change in regulatory philosophy and thus will change the focus, tasks, behavior, and priorities of agency employees, particularly front-line inspection personnel. It will more clearly define and separate the role of the food producer and regulator.

Traditionally, some plants have relied on inspectors to identify deficiencies on a daily basis before the company would take action to correct food safety problems. This factor, and the prescriptive nature of the requirements, has often blurred the line between industry and regulator. Under HACCP, plant owners and operators will be responsible for manufacturing products that are not adulterated or misbranded and that meet performance criteria and standards. Inspectors will be responsible for inspecting facilities, operations, records, and products to verify that regulatory requirements have been met and for taking enforcement action when there is sufficient evidence that requirements have not been met. Under the new system, inspection personnel will exercise the following regulatory oversight responsibilities.

[The information follows:]

HACCP RESPONSIBILITIES TO BE PERFORMED BY INSPECTION PERSONNEL

- Evaluation: to determine that each plant's sanitation SOP and HACCP plan conforms with the regulatory requirements.
- Verification: to determine, on an ongoing basis, that a plant is carrying out its SOP and HACCP plan, including microbial verification.
- Documentation: to prepare written material to document failure to meet regulatory requirements.
- Enforcement: to take appropriate actions when a plant is not in conformance with established regulatory requirements.

4. How much money do you have budgeted for reimbursement to employees' for continued education?

Answer. In fiscal year 1997, FSIS expects to reimburse approximately \$300,000 to in-plant inspection employees for the cost of courses they take on their own time near their work sites in subjects such as statistics and microbiology.

To further enhance the ability of our food inspectors to work in a HACCP environment, the new Food Safety Educational Program was developed in conjunction with Texas A&M University in College Station, Texas. This program is budgeted for \$1,000,000 in fiscal year 1997, and will cover such topics as microbiology, risk assessment, environmental sanitation, food chemistry, and statistical quality control. Students will have the opportunity to experience "hands-on" laboratory training to support lectures. This four week academic program is intensive and demanding, and

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covers as much as would be expected in a normal college semester. College credit will be earned for successful completion of the course. This program will provide nine four-week classes, with 30 inspectors in each class.

5. Why was Texas A&M University chosen to provide in-plant inspectors a scientific foundation in a HACCP environment?

Answer. In 1987, Texas A&M University was competitively awarded a five year contract to assist in providing training and educational opportunities to FSIS personnel. The University successfully competed for a second five year contract which began in 1993. During the nine years FSIS has collaborated with Texas A&M University, they have demonstrated a willingness and capacity to provide high quality educational support. Further, those nine years have given them a greater understanding of the FSIS mission and the environment our personnel work in on a daily basis. The College of Agriculture and College of Veterinary Medicine at Texas A&M have programs in Food Science and Food Technology as well as a highly regarded faculty that FSIS can draw upon to develop educational programs that will help prepare FSIS employees for their changing inspection roles. The current contract allows for development of new programs within the existing provisions to respond to emerging or changing needs.

6. In your statement Mr. Billy, you propose to increase the proportion of resources for the front-line workforce. Food inspectors is one of the areas targeted.

Question. Does this mean there will be a net increase in front-line workforce, including inspectors, as HACCP is fully implemented?

Answer. The 1997 Appropriation provided an increase of \$3.2 million for increased inspection staffing to enable FSIS to provide adequate inspection resources as we make the transition from the current inspection system to HACCP-based inspection. In addition to this increase, the proportion of inspection staff will increase as streamlining of non-front-line positions continues. The fiscal year 1998 budget request includes no further increases for inspection staffing, but includes an increase for full pay costs to maintain current staffing levels in order to cover the slaughter lines and processing operations.

Question. Are we to assume all employee cuts will occur in administrative positions?

Answer. The intent of continued streamlining efforts is to reduce non-front-line positions which include administrative and program positions. Front-line positions include food inspectors, in-plant veterinarians, import inspectors, circuit supervisors, compliance officers, and laboratory personnel.

7. The Committee's fiscal year 1997 recommendation included the full amount requested in your budget to fill all inspector vacancies and to fully implement the hazard analysis and critical control points (HACCP) system.

Question. What actions is FSIS taking to streamline the inspection system for efficiency?

Answer. The agency is reforming its existing regulations to be consistent with HACCP principles and greater reliance on performance standards and to remove unnecessary regulatory obstacles to innovation. On December 29, 1995, FSIS published an advance notice of proposed rulemaking (ANPR) and additional rulemaking proposals describing the agency's strategy for regulatory and inspectional reform and initiating the rulemaking process required to achieve necessary changes. On May 2, 1996, FSIS also published two additional regulatory reform documents—a proposal to eliminate the prior approval system for facility blueprints, equipment, and most partial quality control plans and a proposal to add a performance standard alternative to the current command-and-control requirements governing cooked meat and poultry products. FSIS will ensure that current regulations are revised as necessary before the implementation dates to ensure consistency with the new rules.

FSIS will soon begin a public process to develop and evaluate new approaches to inspection that would ensure that FSIS is making the best possible use of its resources to improve food safety while still meeting all of the consumer protection objectives of the current system. FSIS anticipates a redeployment of some of its inspection resources to successfully implement HACCP and better target food safety hazards during transportation, storage, and retail sale.

Question. Are your HACCP regulations not making it intensive by layering new programs on top of old ones?

Answer. FSIS is undergoing a transition from the traditional inspection system to HACCP-based inspection. Until HACCP provisions are fully implemented, there will be unavoidable, but temporary overlap in inspection activities to ensure the safety of meat and poultry products. FSIS is pursuing the implementation of HACCP provisions in accordance with the time frames in the final rule—for fiscal year 1997, January 27 implementation of sanitation SOPs in all plants and generic

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E. coli testing in slaughter plants. At the same time, the agency's top rulemaking priority is eliminating regulatory provisions that are not consistent with HACCP.

RISK OF MAD COW DISEASE

The Washington Post reported that new machines used to debone meat have raised concerns from consumer groups of the existence of "Mad Cow Disease". The machines not only separate meat from bone but also extract bone, bone marrow, and even spinal cord tissue. The disease may be contracted by humans from eating meat containing spinal cord tissue from infected cows. There has been no discovery of this disease in the United States.

Question. What is USDA's opinion of the advanced meat recovery (AMR) process currently being used by the beef industry?

Answer. USDA considers the meat derived from bones by properly controlled and operated AMR systems to be wholesome and safe for human consumption. Neither spinal cord, central nervous system tissue, nor excessive bone material should be present if the AMR process is properly controlled by the establishment. USDA does not believe that spinal cord, central nervous system tissue, or excessive bone material should be included in product labeled as boneless meat regardless of the process through which the product is derived.

Question. How have the consumers' concerns been allayed?

Answer. The Food Safety and Inspection Service is preparing a directive to define inspection tasks which will specifically deal with the inappropriate presence of spinal cord in boneless meat derived from AMR systems. FSIS will continue to analyze AMR system survey data to determine the necessity of regulation which addresses the composition of product from AMR systems. FSIS will consider what rule-making or other regulatory action may be appropriate to clarify the status of product derived from AMR systems.

RESEARCH FUNDING

In your statement Mr. Billy, you mention several areas where research will play an integral role in the Food Safety Initiative.

Question. What is the Department's total budget for the food safety/pathogen reduction research?

Answer. The Department's overall budget for food safety research is estimated at about \$63 million in 1997. The 1998 President's budget funds food safety research at \$72 million, or about \$9 million or 14 percent above 1997.

About \$50 million or 80 percent of the total research is conducted by the Agricultural Research Service (ARS). The agency aims to improve the quality and safety of animal products used as food for humans and to reduce losses in animal productivity resulting from pathogens, diseases, parasites, and insect pests. ARS conducts both pre- and post-harvest research to reduce potential risks for consumers by targeting toxicants, chemical residues, and other substances which contaminate the food supply.

An increase of \$4.1 million in the ARS 1998 budget is focused on control of pathogens which cause food-borne illness such as Salmonella, Campylobacter, and E. coli, and to develop pre-harvest detection and enumeration methods required to identify specific control points and strategies to limit infection in meat and poultry products. The request also provides for post-harvest research to facilitate the development of effective Hazard Analysis and Critical Control Point (HACCP) programs in the slaughter and processing of meat and poultry products.

The land-grant universities with financial support from the Cooperative State Research, Education, and Extension Service (CSREES) are the other major providers of food safety technology and research-based information. The CSREES budget for food safety research is about \$12 million in 1997. The agency uses formula funds and special research grants to develop rapid, selective and sensitive methods for pathogen detection prior to consumer consumption, and to develop intervention technologies to eliminate pathogens. In addition, the National Research Initiative (NRI) supports studies on risk assessment that will lead to improved methods for detection and/or control of disease-causing microorganisms, and to benefit and cost analysis in support of HACCP regulations.

An increase of \$2 million is proposed in the CSREES 1998 budget for competitively awarded special research grants to investigate pre- and post-harvest issues for detection and control of pathogens and for production, processing, and handling management practices and enhance food safety education programs emphasizing pre-harvest activities, HACCP and other quality assurance programs, and industry compliance education. An additional \$2 million is proposed to enhance food safety

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education programs focusing on pre-harvest activities, HACCP and other quality assurance programs, state certification programs, and industry compliance education.

Research activities carried out by other Departmental agencies include improving the early warning system for foodborne illness and for providing HACCP training for state and local health officials, and for improving consumer education.

In addition to food safety research, the Secretary has allocated \$10 million of the Fund for Rural America to address four specific activities, one of which is aimed at assisting small meat and poultry processors implement HACCP plans. This assistance will complement efforts by FSIS to provide direct technical assistance to small establishments for achieving improved food safety under the new inspection system. The Department is currently evaluating proposals submitted for this activity and will announce actual funding allocations this summer.

GRANTS-TO-STATES

The budget request for fiscal year 1998 is \$1.13 million to defray increased costs in State inspection programs and to pay for State inspectors.

Question. How many states currently participate in the Grants-to-States program?

Answer. Currently, 26 states participate in the Grants-to-States Program.

Question. What amount does each participating state receive?

Answer.

[The information follows:]

[Obligations in Thousands of Dollars]

State	1996	1997	1998
Alabama	\$1,275	\$1,290	\$1,325
Alaska	341	345	355
Arizona	585	605	621
Delaware	213	217	223
Florida	1,967	2,044	2,099
Georgia	2,404	2,473	2,540
Hawaii ¹	293		
Illinois	4,361	4,698	4,825
Indiana	1,653	1,704	1,750
Iowa	1,011	1,059	1,088
Kansas	1,283	1,412	1,450
Louisiana	1,755	1,843	1,893
Mississippi	1,099	1,103	1,133
Montana	341	353	363
New Mexico	419	423	435
North Carolina	2,849	3,061	3,143
Ohio	4,620	4,633	4,757
Oklahoma	1,617	1,631	1,676
South Carolina	1,133	1,189	1,221
South Dakota	483	480	493
Texas	4,603	4,776	4,903
Utah	771	828	850
Vermont	284	296	304
Virginia	1,293	1,309	1,344
West Virginia	597	609	626
Wisconsin	2,985	3,034	3,116
Wyoming	284	313	322
Total	40,519	41,728	42,855

¹ As of November 1, 1995, the Hawaii inspection program converted from State to Federal inspection.

THE PRESIDENT'S FOOD SAFETY INITIATIVE

1. Before the President's budget was released, The Washington Post reported on January 25, 1997, that President Clinton would request a total of \$43 million to fight outbreaks of food contamination. The article also stated that \$31.5 million would be requested for food safety research and inspection systems. Of that amount, FSIS would get under this proposal \$8.5 million.

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Question. Please provide the activities and the money requested in the fiscal year 1998 budget that are considered to be a part of the President's Food Safety Initiative.

Answer. The January 25, 1997, Washington Post article incorrectly reported that FSIS would receive \$8.5 million under the President's food safety initiative. The initiative includes \$9,179,000 for USDA, of which \$1,065,000 is for FSIS initiatives. This includes \$500,000 for the Sentinel Site Survey to support the "Early Warning System" for public health surveillance and \$565,000 to provide HACCP training for State and local food regulatory officers.

Question. Which activities are currently the existing mission of the FSIS? Which proposals are new to FSIS and are a result of the President's initiatives?

Answer. FSIS currently provides \$1 million annually and works with the Centers for Disease Control and Prevention (CDC) and the Food and Drug Administration (FDA) on the Sentinel Site Survey to assist our efforts at protecting the public health through ensuring the safety of meat, poultry, and egg products. The objective of the Sentinel Site Survey is to estimate the national incidence of the major foodborne diseases and to explore what relationships may exist between specific pathogens and the types of meat, poultry, and other food products associated with them.

With sentinel site information, FSIS can identify areas of concern, review HACCP programs and, where appropriate, trigger changes to prevent future outbreaks of foodborne illness. The requested increase of \$500,000 will enable FSIS to obtain information on the high priority pathogen, *Campylobacter*, the most common foodborne pathogen. This information will provide FSIS with a more complete picture of the incidence of foodborne illness, which is necessary in order to identify appropriate measures for controlling and preventing foodborne illness.

FSIS is committed to assisting States with implementation of HACCP requirements. The requested increase of \$565,000 to provide HACCP training to State and local regulatory officials at the retail level will further assist States, and address the risk to food safety in meat and poultry processing activities regulated by State and local authorities.

2. The President's Food Safety Initiative creates an early warning system that consists of five food sentinel sites. In addition, the President's budget also requests monies for additional states to have improved surveillance, investigation, control, and prevention of food borne disease outbreaks.

Question. What is FSIS's role in the new "Early Warning System"?

Answer. The "Early Warning System" described in the President's Food Safety Initiative builds on the existing Sentinel Site Surveillance Project, recently named "FoodNet". FSIS has scientific input through its membership on the project steering committee and its participation in investigating outbreaks of illness associated with meat and poultry products.

Question. How much money does FSIS contribute to each of the five food sentinel sites?

Answer. Through an agreement with CDC, FSIS provides \$1 million per year to FoodNet and has proposed an increase of \$0.5 million for fiscal year 1998 to cover *Campylobacter* case control studies at the expanded eight sites. FoodNet activities and resources at the sites are managed by CDC, who also selects each site through a competitive process.

Question. How many total sites does the President's Food Safety Initiative propose and what are their locations?

Answer. The President's Food Safety Initiative proposes to conduct FoodNet in no less than eight sites. Surveillance will continue at the five sites established in 1995, which encompass the Minneapolis/St. Paul, Minnesota metropolitan area; Oregon; selected counties in Northern California; Connecticut; and the Atlanta, Georgia metropolitan area. These sites represent approximately 13 million people, or 5 percent of the U.S. population.

An additional three sites will expand surveillance coverage to about 10 percent of the U.S. population. These sites are being selected by CDC through a competitive process. Two of the sites are the Rochester, NY area and the Baltimore, MD area. The selection process has not been completed for the eighth site.

Question. Are these sites permanent which will require yearly allocations?

Answer. CDC manages the selection and surveillance of sites. Funding requirements for FoodNet are expected to continue on a yearly basis, as proposed.

Question. How will the requested funds be used to improve surveillance, investigation, control, and prevention of food borne disease outbreaks?

Answer. The requested increase would cover *Campylobacter* case-control studies at the expanded eight sites. Expanding surveillance coverage to eight sites, or 10 percent of the population, would increase the statistical significance of the effort

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among the sites and federal agencies. By strengthening FoodNet, the initiative will create the "early warning" capability described by the President. Such a system could detect large outbreaks as they begin, then quickly alert states and federal agencies, whose rapid response could avert further foodborne illnesses and deaths.

Epidemic investigations as well as planned case-control studies within the expanded surveillance network will identify specific foods or food processing activities associated with pathogens and human illness. By identifying and implementing corresponding control or prevention practices throughout the food chain, the risk of foodborne illness could be reduced nationwide.

Question. Outline your farm-to-table strategy for inspection.

Answer. The final HACCP rule addresses hazards within slaughter and processing plants. FSIS recognizes, however, that these measures must be part of a comprehensive food safety strategy that addresses hazards at other points in the farm-to-table chain. To that end, FSIS is broadening the scope of its food safety activities beyond slaughter and processing plants, with particular new emphasis on hazards that arise during transportation, distribution, and retail sale.

To improve food safety at the animal production and intermediate stages before the slaughter plant, FSIS is working with industry, academia, and other government agencies to develop and foster measures that can be taken on the farm, and through distribution and marketing of animals to reduce food safety hazards associated with animals presented for slaughter. FSIS does not intend to mandate production practices at this stage, but instead believes that the voluntary application of food safety assurance programs based on HACCP principles can be useful in establishing risk reduction practices on the farm and during intermediate marketing stages. The agency believes that continued public concern about foodborne pathogens and the adoption of HACCP and performance standards will increase incentives for producers to adopt food safety practices at the animal production level.

Food safety during transportation, storage and retail sale are also important links in the food safety chain. In these areas, FSIS, FDA, and State and local governments share authority for oversight of food products. FSIS and FDA are jointly working to develop standards governing the safety of foods during transportation and storage, with particular emphasis on the importance of temperature control in minimizing the growth of pathogenic microorganisms.

In the retail area, FSIS and FDA are working with state officials to ensure the adoption of uniform, science-based standards and to foster the adoption of HACCP-type preventive approaches. State and local authorities have primary responsibility for food safety oversight of retail stores and restaurants, but FSIS and FDA, working through the Conference for Food Protection, can provide expertise and leadership to support local authorities and foster the development of sound food safety standards and practices nationwide.

Even as progress is made in reducing contamination during these stages, it will remain critical that retail food handlers and consumers follow safe food handling practices. Proper storage, preparation, and cooking of meat and poultry products are essential to achieving the goal of reducing the risk of foodborne illness to the maximum extent possible. FSIS intends to augment its food handler education efforts by expanding its collaboration with industry, other government agencies, consumer and public interest groups, educators and the media to foster the effective delivery of food safety education and information.

Question. What resources are required?

Answer. For fiscal year 1998, a program level request of \$591.2 million is required to maintain the inspection workforce at its current level in order to provide inspection; to provide laboratory capability to meet HACCP requirements for product sampling and testing; and provide scientific leadership on food safety priorities, such as the FoodNet.

USER FEES

1. The fiscal year 1998 President's budget proposes user fees to recover the full cost of direct on-site product inspection. It is estimated that this proposal will generate \$390 million in new revenues. Last year, the Administration proposed user fees to pay for inspection incurred during overtime. The industry and Congress balked at this proposal and refused to incorporate user fees.

Question. If user fees for overtime shifts were proposed and rejected by the Congress and industry, why do you believe a user fee proposal to recover the full costs of inspection would fare any better?

Answer. The administration believes that the collection of user fees is essential to the successful long-term implementation of meat, poultry, and egg products inspection reforms. If industry takes responsibility for the cost of inspection, industry

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would be assured of sufficient resources to efficiently operate plants, and the Administration could then fully focus its efforts on developing and implementing necessary inspection reforms which would thereby improve consumer confidence in meat, poultry, and egg products. With inspection no longer subject to annual budget pressures, the agency will not have to balance food safety reform initiatives against inspection staffing needs.

Question. Has this proposal been submitted to the Congress?

Answer. The legislative proposal will be submitted to Congress in the next few weeks.

Question. What benefits would consumers receive if these fees were authorized?

Answer. If industry takes responsibility for the cost of inspection, the Administration can then fully focus its efforts on developing and implementing necessary inspection reforms which would thereby improve consumer confidence in meat, poultry, and egg products.

Question. How does the agency plan to implement these user fees?

Answer. FSIS is analyzing a number of user fee approaches. These include systems based on inspection staff years, pound of liveweight or raw meat input, numbers of carcasses, and registration for inspection. Through the rulemaking process, the agency will seek input from the public on developing a user fee system that is equitable, cost-effective and accountable. The Department has developed, and is pursuing an implementation schedule to ensure that regulations will be in place to implement the fees on October 1, 1997, assuming enactment of the legislation.

Question. Were all of the inspector vacancies filled with the fiscal year 1997 allocation?

Answer. The 1997 Appropriation is sufficient to provide inspection coverage that is adequate to ensure the safety of regulated product, as well as accommodate industry growth.

Question. Was HACCP fully implemented with the fiscal year 1997 allocation?

Answer. In accordance with the provisions of the final HACCP rule, pre-HACCP sanitation standard operating procedures, SOPs, were implemented in all plants and E. coli testing was begun in all slaughter plants, effective January 27. HACCP implementation will begin in fiscal year 1998, and the implementation schedule will be based on plant size. Large plants with 500 or more employees are required to have their HACCP systems in place by January 26, 1998. Small plants with 10 to 499 employees are required to implement HACCP by January 25, 1999. Very small plants with fewer than 10 employees or less than \$2.5 million in annual sales have until January 25, 2000 to implement HACCP.

2. Your total request for FSIS is \$591 million for fiscal year 1998. For fiscal year 1998, appropriations the Administration's legislative proposal for inspection user fees would require \$201 million to provide laboratory support for inspection, animal production food safety investments, investments in new inspection system improvements, and program administration.

Question. How would the adoption of this user fee legislation impact the fiscal year 1998 appropriations request for the FSIS?

Answer. The 1998 budget includes the assumption that adoption of the user fee legislation would reduce the FSIS Appropriations request from \$591.2 million to \$201.2 million for fiscal year 1998. Upon enactment of the legislation, FSIS will do rulemaking to implement a user fee system to recover an estimated \$390 million in inspection costs.

3. Assuming the enactment of the Administration's user fee proposal, the FSIS appropriations request for fiscal year 1998 is \$201 million. The assumption would also be that the legislative proposal for FSIS recovers \$390 million in user fees which will be paid by the industry. Your testimony states that the industry assumes 70 percent of the total cost of the program if the user fee proposal is enacted.

Question. What are the projected appropriations needed for fiscal year 1998 and the succeeding five years out?

Answer. Under current law, the projected appropriations needed are \$591.2 million for fiscal year 1998. Assuming enactment of the proposal to recover the cost of salaries and benefits for mandatory inspection, the projected fiscal year 1998 appropriations needed are \$201.2 million for laboratory support for inspection, animal production food safety investments, new inspection system improvements designed to enhance safety and productivity, and program administration. The long term implications of the proposed legislation are as yet to be determined.

Question. What specific costs would be borne by the industry for fiscal year 1998 and the succeeding five years out?

Answer. Industry would be responsible for the cost of all salaries and benefits of personnel performing mandatory inspection of meat, poultry, and egg products.

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Question. What assumptions are these appropriations and user fee collections based on in terms of the cost of the fees paid and the activities provided by these fees, e.g. fees collected only cover costs of in-plant inspections?

Answer. The estimated collection of \$390 million in the user fee proposal is based on the fiscal year 1998 projected cost of salaries and benefits for the fiscal year 1997 staffing ceiling of permanent full-time employees and other than permanent full-time employees who perform mandatory inspection of meat, poultry, and egg products.

Question. Do these assumptions change once HACCP is implemented?

Answer. The proposed legislation provides user fees for salaries and benefits of personnel conducting inspection and compliance services incident to the inspection of meat, poultry, and egg products. Under HACCP, we continue to recover the same costs.

Question. Have you consulted with industry on this user fee proposal?

Answer. Industry representatives are being invited to a meeting scheduled for March 10, to comment on the user fee proposal.

SALARIES AND EXPENSES

The Under Secretary for Food Safety and Inspection Service position remains vacant.

Question. What has been done with the funds provided for fiscal year 1997 and previous fiscal years?

Answer. The first annual appropriation for the Office of the Under Secretary for Food Safety was provided for fiscal year 1996. The total costs in fiscal year 1996 for this office were \$440,000 for the salaries and benefits, travel, and other operating costs of the Acting Under Secretary, one confidential assistant, and two clerical staff. For fiscal year 1997, very little of the funding for this office has been obligated since positions in the Office of the Under Secretary were vacated early in the fiscal year.

Question. Why was a request for funds made in the fiscal year 1998 President's budget?

Answer. Funding for the Office of the Under Secretary for Food Safety was included in the 1998 President's budget based on the expectation that positions for that office will be filled in fiscal year 1998.

QUESTIONS SUBMITTED BY SENATOR BURNS

EXPLANATION OF HACCP FINAL RULE TO PRODUCERS

Question. Mr. Billy, can you provide the committee information on what you are doing to explain the new rules and regulations on meat inspection to the people on the ground, the producers?

Answer. The Food Safety and Inspection Service (FSIS) has planned a series of meetings on the Plant Communications Initiative to improve communications with inspected establishments, especially small and very small plants, as they implement new federal food safety requirements for meat and poultry plants. These requirements are contained in the Hazard Analysis and Critical Control Points (HACCP) final rule.

FSIS has scheduled ten public meetings across the country, including one teleconference, to facilitate direct input on how the Agency can better communicate with plants. Locations for the meetings include Tennessee, Pennsylvania, Massachusetts, Missouri, Alabama, California, Illinois, North Carolina, Texas, and Wisconsin.

At each meeting, FSIS Administrator Thomas J. Billy and Dr. Craig Reed, Deputy Administrator for Field Operations, will meet with plant managers to discuss information and communication needs. In particular, the Agency would like to know:

—What kind of information plants need from FSIS to successfully implement HACCP;

—What are the best ways FSIS can meet plant needs, including working with new technologies; and

—How can FSIS get a consistent inspection message to all plants.

In addition to meetings, the Agency is working with groups of small and very small establishments and their institutional cooperators (universities, trade groups, and consultants) on projects which are designed to demonstrate how small plants can meet the requirements of the HACCP final rule. Material under development to explain the requirements for small and very small plants includes the following:

—Guidebook for the Development of HACCP Plans;

—Hazards and Controls Guide;

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- 13 Generic HACCP Models;
- Reproduction of a HACCP Plan Development Video Produced by Agriculture Canada and Agri-Food Canada;
- Guidance Material for E. coli Testing for Livestock and Poultry;
- Video for Sampling Carcasses for E. coli Testing; and
- Guidance Material on Statistical Process Control.

FSIS also recognized early that the implementation of the final HACCP rule would have a significant indirect impact on the food animal production community. The Agency is working proactively with the various industry and professional organizations which represent all segments of the food animal production process to raise the level of awareness about the regulation, its potential ramifications for their respective members, and what action they may wish to consider.

At the animal production level, the FSIS strategy is to encourage the voluntary use of the existing commodity food safety and quality assurance programs, which are based on HACCP principles, to reduce food safety risks. We believe that producers who implement the practices recommended in these programs will be able to provide slaughter plants with the assurances they need regarding the residue safety of the animals they process.

Question. In December of last year, the Food Safety and Inspection Service was asked to come to Montana to discuss the rules and regulations on meat inspected coming in from Canada to the general membership of the Montana Stockgrowers Association. There had been talk that there may be some discussion on a personnel matter in the agency at this same meeting. However, I believe all that was resolved and the topic of discussion was to be the inspection of meat coming across the border from Canada. Yet, a day later when I met with these same people they were anything but confident in the process and the discussion that had occurred. I would hope you could make it a part of this new program to make sure that the producers understand the process and the costs that they will ultimately bear. Can you assure this committee that you will meet with producer groups to make sure that they do understand what it is that they will be paying for?

Answer. A major objective of the ten public meetings FSIS has scheduled across the country is to find out from plant managers the kind of information plants need from FSIS to successfully implement HACCP. We intend to provide the needed information, and work with plants to assist them in implementing HACCP.

INTERSTATE SHIPMENT ISSUE

Question. What is the Agency doing at this time to resolve the differences that have recently occurred between the state inspection process and the federal?

Answer. FSIS is ready to address the concerns of state-inspected plants and state Departments of Agriculture underlying this issue, but is not ready to endorse the “merging” of state and federal inspection or other specific solutions proposed for those concerns without further analysis of the issues. FSIS is publishing a notice in the Federal Register announcing two public meetings on this issue on June 16 and 17, 1997, in Sioux Falls, South Dakota, and on July 22, in Washington, DC. These meetings are to solicit information on ways to improve Federal and State cooperation in the implementation of the Federal inspection laws and whether, and if so, how, those laws should be changed to permit State inspected product to move in interstate commerce.

USDA is very concerned that state-inspected processors wishing to distribute their product across state lines view the obtaining of federal inspection to be an unreasonable obstacle in their path, and would consider changes in how FSIS grants federal inspection to such plants if warranted. Similarly, USDA views state inspection programs as an essential part of the Nation’s food safety network, and is open to new ideas on how to better support them and keep them viable. The Department wants to have the best possible working relationship with state meat and poultry inspection programs and the establishments they inspect.

FSIS is in the process of making major changes in how it conducts federal inspection; changes aimed at reducing risks to public health through a shift to HACCP-based inspection and imposition of new pathogen reduction requirements. It is important that FSIS implement these changes with care and without delay, and that state programs have the guidance and assistance they need to make their inspection programs “equal to” the federal program in a timely fashion. Any additional major changes in its inspection program would divert USDA resources from risk reduction efforts and could lead to delays in implementing HACCP and pathogen reduction requirements. That is, it is suggested that the public costs of instituting such a change at this juncture may well outweigh the public benefits.

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DIFFERENCES IN INSPECTION OF MEAT AND POULTRY

Question. As I mentioned in my statement, in Montana we do not have a large number of chicken producers. However, if agriculture pulls the wagon of the economy in Montana, then livestock's production is the beast of burden. Can you put in real terms, that all America can understand, the difference in the treatment of white meat products and red meat products in the inspection process, and the cost difference?

Answer. FSIS contracted with the Research Triangle Institute (RTI) to conduct a comprehensive comparative study of meat and poultry regulations. RTI completed its study in June 1993. For the record, I will provide the study by RTI, and the FSIS analysis of the study. In summary, the study found that differences in the regulations and the inspection process are sometimes justified by the fact that "the two industries deal with different animals, and have different production processes," and that the "laws for market protection were designed to protect the markets within each industry . . . and to] use industry standards; and FSIS has no authority to reconcile those standards between industries." The study found that the cost of an inspector's salary and benefits per pound of inspected product is \$0.0020 liveweight for red meat and \$0.0046 liveweight for poultry.

[The information follows:]

[Research Triangle Institute, June 1993]

COMPARISON OF MEAT AND POULTRY REGULATIONS (SUMMARY REPORT)

BACKGROUND

The Food Safety and Inspection Service (FSIS) of the U.S. Department of Agriculture (USDA) is responsible for inspecting all meat and poultry products shipped in interstate commerce and for assuring consumers that meat and poultry products are wholesome; not adulterated; and are properly marked, labeled, and packaged. The Federal Meat Inspection Act (FMIA) and the Poultry Products Inspection Act (PPIA), both as amended, provide USDA this mandate. FSIS administers and reviews inspection activities to ensure that the agency's policies and regulations are consistent with the FMIA and PPIA.

Industry representatives have expressed concerns that differences in USDA regulations for meat and poultry inspection may benefit or harm one segment of the industry or the other. In response, the FSIS Administrator requested a comprehensive comparison of the meat and poultry regulations to identify and describe significant requirement differences. Consequently, Research Triangle Institute and three independent consultants (hereafter RTI) reviewed Title 9, Code of Federal Regulations, Subchapters A (Mandatory Meat Inspection [Parts 301–335]) and C (Mandatory Poultry Products Inspection [Part 381])¹ to identify all substantive regulatory requirements not already identical, outline the significant differences by specie, and classify the bases for those significant differences. The purpose of this report is to document RTI's findings and to outline its method of evaluation regarding this comprehensive regulatory comparison.

FINDINGS

In general, the regulations covering meat and poultry have been designed with the same intent—to protect "the health and welfare of consumers by assuring that meat and meat food products [or poultry products] are wholesome, not adulterated, and properly marked, labeled, and packaged" (p. 1139).² However, although the intent of the regulations remains the same, the actual requirements are quite different. This is to be expected considering that the regulated species have inherently different characteristics. These different characteristics were considered as the rules and regulations evolved. The regulations contain and present the means for effectively accommodating those differences as the respective meat and poultry industries go about challenges of converting raw materials into foods for humans and into other byproducts (e.g., pet food).

It is within this context that we attempted to outline the differences that currently exist between the meat and poultry regulations and to classify the bases for those differences. RTI applied a "general acceptance" rule in making its determinations. If RTI judged that objective and knowledgeable professionals would generally agree on the identification and classification of the regulatory differences found, then our findings were stated accordingly. Industry was not consulted, nor were cost

¹ 9 CFR Parts 301–335, and 381, respectively; Revised as of January 1, 1992, with ancillaries.

² 21 U.S.C. § 602 and § 451.

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evaluations conducted for determination of minor vs. significant differences. Furthermore, RTI did not attempt to justify the regulatory differences found. The following is the summary of our findings.

Minor Regulatory Differences In General

The meat and poultry regulations contain hundreds of differences in regulatory requirements. Most of these differences were identified as “minor.” Most of these “minor” regulatory differences are based on language variations (e.g., poultry regulations generally are shorter and more concise than are those for meat). These variations probably developed as a result of the time differential between regulatory enactment of the FMIA (1907) and the PPIA (1957).

Regulatory differences are deemed “minor” when the intent of the regulation is essentially the same and in RTI’s opinion there is no identifiable difference between the burdens imposed on meat and poultry producers. These differences are denoted in the main report document as “minor,” and no bases for these differences are given.

Significant Regulatory Differences in General

The regulations also reflect a number of significant regulatory differences that stem primarily from inherent differences in the two industries. First, the species slaughtered and processed are different, and they have different diseases and conditions. Thus, the procedures, processes, and equipment used to obtain consumer-ready products vary considerably between meat and poultry species. Differences of this type are outlined in the Appendix and are noted as being primarily based on inherent specie differences, which require variations in slaughter, processing, inspection, and labeling methods to ensure wholesome, nonadulterated products.

Second, the poultry industry had been growing and expanding under voluntary poultry inspection for many years prior to the mandatory Federal legislation of 1957. When the regulations were written for mandatory poultry inspection, customary and usual industry practices and standards of the time were incorporated into the regulations. Consequently, poultry regulations that are similar in subject category to meat regulations (e.g., standards of identity) reflect differences in 19th traditional industry practices that continue today (e.g., “chili con carne” must have a minimum of 40 percent fresh meat; “(poultry) chili” must have a minimum of 28 percent cooked, deboned meat). Differences of this nature are outlined in the Appendix, and the basis for these differences are classified as “traditional” (i.e., “traditional” industry practices were included in the regulatory language at the time of codification).

Finally, the poultry regulations in some parts contain very detailed requirements while the counterpart meat regulations are very general in content. This can be attributed largely to the fifty or so years difference in the ages of the FMIA and the PPIA. The meat inspection program evolved mostly during a period when policies and procedures were published in directives, manuals, and similar publications. The more recent poultry inspection program was developed mostly during a period when policies and procedures were promulgated by rulemaking, to permit public comment and better public notice consistent with the Administrative Procedure Act. (It should be noted, however, that in the last decade or so Federal agencies were discouraged from issuing new regulations, leading to a return to greater reliance on directives and policy guidance issued directly by FSIS for both meat and poultry inspection matters). It can be argued that such differences are also attributable to larger, more drastic technological and marketing changes occurring in the poultry industry in recent decades than in the red meat industry, leading to greater need for poultry inspection procedures to change and adapt. These differences have been outlined in the Appendix and their basis for differences identified primarily as “historical.”

These specie, traditional, and historical-based regulatory requirement differences are deemed “significant” in that they are not “minor” differences (i.e., the potential burden on producers for such regulations may be greater on one industry or another). These “significant” differences are outlined in the report and the basis for those differences are given.

Specific Significant Regulatory Differences

Although most regulatory differences between meat and poultry are minor and/or of no real consequence to either the meat or poultry industries, there was a general agreement at RTI and among its consultants that a small number of differences may be viewed as potentially significant in terms of cost advantage to one industry or another (or to FSIS in terms of the relative costs of administering the two regulatory programs). Again, these differences identified reflect the judgment and consensus of RTI; industry was not consulted, nor were cost evaluations done. These specific significant differences are outlined below by subject area. In addition, the

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Appendix page numbers and CFR citation references are given for ease in locating each difference.

1. Carcass Chilling Procedures

Traditional chilling methods for meat and poultry carcasses are different. Meat is chilled by exposing it to cold air. Poultry chilling by cold air and by cold water immersion are both permitted. Poultry carcasses normally are immersed in chilled water and ice. The immersion chilling method for poultry allows for the absorption of 8 percent or more of water by weight into the poultry carcass, a gain in carcass weight that dry chilling methods do not impart to livestock carcasses. Livestock carcasses may be sprayed while being chilled, but are not permitted to gain weight in the process. The basis for these differences is primarily traditional (i.e., current industry practices written into the regulations at the time of codification).

Page No.	Meat CFR	Poultry CFR
F-10 to F-15	None	§ 381.66(d)(1)–(6).

2. Humane Slaughter

There exist regulatory requirements—with their related procedures, controls, and penalties—for the humane slaughter of livestock. There are no corresponding laws or regulations for poultry. The basis for these differences is statutory (i.e., requirements for humane slaughter of livestock are contained in the FMIA; no comparable requirements for the humane slaughter of poultry are included in the PPIA). (See 21 U.S.C. § 603[b], 610[b].)

Page No.	Meat CFR	Poultry CFR
I-1 to I-12	§ 313.1 § 313.2 § 313.5 § 313.15 § 313.16 § 313.30 § 313.50	None. None. None. None. None. None. None.

3. Poultry Reprocessing

Carcasses contaminated on the slaughter floor are considered adulterated. Poultry carcasses may be reprocessed by washing of contaminated areas with chlorinated water; poultry regulations allow for such reprocessing and provide for equipment and procedures to accomplish it. Contaminated meat may not be washed. Trimming of contaminated areas is the only accepted method for removal of ingesta or fecal materials from livestock carcasses. The PPIA expressly permits reprocessing of poultry; the FMIA has no such provision. (See 21 U.S.C. § 455[c].)

Page No.	Meat CFR	Poultry CFR
H-27 to H-28	None	§ 381.91(b)(1)–(2).

4. Poultry Slaughter Modernization

Certain regulations that provide for new poultry inspection procedures, responding to the modernization of poultry slaughter technologies, could have comparable applications to livestock slaughter but have not been adopted in meat post-mortem inspection. These include:

(a) The use of quality control (QC) concepts and cumulative sum (CUSUM) in establishing and controlling product nonconformities.

(b) Plant-operated QC programs and personnel for the purpose of attaining maximum production potential.

(c) Finished Product Standards (FPS) published in the regulations.

The basis for these differences is essentially “unknown” (i.e., these procedures could, with modification, be done for meat species the same as for poultry species).

Page No.	Meat CFR	Poultry CFR
G-23 to G-24	None	§ 381.76(b)(3)(i)(a)– (d), (g), (h).

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Page No.	Meat CFR	Poultry CFR
G-28 to G-50	None	§ 381.76(b)(3)(iv)(c) + .

5. Exemptions

Generally, the regulatory exemptions from inspection are more liberal for poultry than for meat. For instance, the meat regulations permit the uninspected slaughter and processing of livestock for household use only, but the poultry regulations permit the uninspected slaughter, processing, and sale of limited quantities of poultry and poultry products to consumers. In addition, the poultry regulations exempt from inspection certain products containing small amounts of poultry that would otherwise receive inspection under the meat regulations. The basis for most of the exemption differences is statutory. (See 21 U.S.C. § 464 and § 623.)

Page No.	Meat CFR	Poultry CFR
A-4	§ 303.1(d)(2)(i)(c)	§ 381.10(d)(2)(i)
A-19	None	§ 381.10(a)(1).
A-20	None	§ 381.10(a)(5).
A-21	None	§ 381.10(a)(6), (a)(7).
A-22	None	§ 381.10(a)(7)(b), (c).
A-22	None	§ 381.11(a).
A-23	None	§ 381.12.

6. Sanitation

The meat regulations require the mandatory use of 180 °F water to clean and disinfect slaughter equipment in many instances. There are no such requirements in poultry. The basis for this difference is “unknown.”

Page No.	Meat CFR	Poultry CFR
D-4	§ 308.3(d)(4)	§ 381.50(b).
D-12	§ 308.8(c)	§ 381.58(a).

7. Mechanically Separated Product

Mechanically Separated (Species) (MS[S]) meat product conforming to prescribed compositional standards is permitted to be used in limited quantities in certain products. Label and use restrictions are required, along with calcium content testing and labeling. A QC program is necessary for a plant to produce MS(S). Mechanically separated poultry (MSP), a comparable product, is permitted to be used in unlimited quantities in poultry products and labeled as chicken or turkey. Bone content is the only compositional standard required. A court decision declaring that mechanically separated meat product is not “meat,” coupled with relatively quick, large-scale introduction of MSP into various poultry products, appear to be the primary bases for these regulatory differences.

Page No.	Meat CFR	Poultry CFR
L-75	§ 318.18	None.
M-2	§ 319.5(a)	§ 381.117(d).
M-3	§ 319.15(c)	§ 381.160.
M-4	§ 319.300	§ 381.167.
M-5	§ 319.301	§ 381.167.
	§ 319.302	§ 381.167.
	§ 319.304	§ 381.167.
M-6	§ 319.305	§ 381.167.
	§ 319.311	§ 381.167.
	§ 319.312	§ 381.167.
M-8 to M-10	§ 3195(e)(1)-(2)	None.
M-10 to M-11	§ 319.6	None.
M-17	§ 319.105(b)	None.

8. Cooking Temperatures

There exist regulatory requirements (and attendant controls and procedures that go with them) concerning time/temperature cooking relationships for the control of salmonella in beef, and for the control of trichina in pork. There is not a similar approach to cooking poultry rolls, which only require cooking to 160 °F. or to 155 °F

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if cured and smoked. The basis for these differences is that certain meat products are eaten “rare” by consumers; poultry products are generally not eaten “rare.”

Page No.	Meat CFR	Poultry CFR
L-35 to L-36	§ 318.17(a)–(c)(3)	§ 381.150.
L-71 to L-75	§ 318.17(d)(1)–(k)	None.

9. Use of Skin

The poultry regulations provide that poultry carcasses, cuts, and products may contain skin. The percentage permitted ranges from 8 to 20 percent (natural proportions) and may be added to the product without label declaration. In meat, pork jowls with attached skin is permitted in processed products with a proper label declaration. Detached skin is not permitted. The poultry regulations also permit the use of skin in natural proportions in poultry burgers and patties; hamburger must be made of beef of skeletal origin. Traditional poultry industry practice is the primary basis for these differences.

Page No.	Meat CFR	Poultry CFR
M-3	§ 319.15(b)	§ 381.160.
M-46	None	§ 381.168.

10. Chilling and Freezing Requirements

The poultry regulations contain numerous requirements concerning time/temperature relationships for the chilling or freezing of poultry carcasses and parts. These requirements consume inspector time to assure compliance. There are no such requirements for meat carcass chilling or freezing. The basis for these differences is traditional industry practice.

Page No.	Meat CFR	Poultry CFR
F-6 to F-10	None	§ 381.66(b)–(c)(5).
F-17 to F-18	None	§ 381.66(c)–(f)(6).

11. Standards of Identity

In similar meat and poultry products with standards of identity, the required percentage content of cooked poultry is usually less than the meat content. For examples “(meat) hash” must contain a minimum of 35 percent fresh meat; “(poultry) hash” must contain a minimum of 30 percent cooked, deboned meat. The basis for these differences is traditional industry practices.

Page No.	Meat CFR	Poultry CFR
M-4	§ 319.300	§ 318.167.
M-5	§ 319.301	§ 318.167.
	§ 319.302	§ 318.167.
	§ 319.304	§ 318.167.
M-6	§ 319.305	§ 318.167.
	§ 319.311	§ 318.167.
	§ 319.312	§ 318.167.
M-7	§ 319.313	§ 318.167.

12. Moisture Limitations in Processed Products

- Moisture limitations in processed products tend to favor poultry. For example:
- (a) Fresh Meat Sausage must have ≤3 percent added water; Fresh Poultry Sausage has no limit.
 - (b) Cooked Meat Sausage must have ≤40 percent combined fat and water; Cooked Poultry Sausage has no limit.
 - (c) Pork Ham is protein fat free (PFF) controlled for both Domestic and Foreign Imports; Turkey Ham has no PFF control.
 - (d) Meat Roast must have label declaration of any added moisture; Poultry Roast may contain ≤10 percent added moisture without label declaration.
- The Appendix’s entry under “basis for no compatible [poultry] regulation,” with regards to items (a)–(c), is “unknown.” With regards to item (d), the “basis for the difference” is traditional industry practices.

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Page No.	Meat CFR	Poultry CFR
M-21	§ 319.140	None.
M-26	§ 319.180	None.
M-14 to M-15	§ 319.104	None.
M-16 to M-18	§ 319.105	None.
L-76 to L-83	§ 318.19(a)(5)	None.
P-39 to P-44	§ 327.23	None.

METHOD OF EVALUATION

Figure 1 is a Flow Diagram of the method of evaluation.

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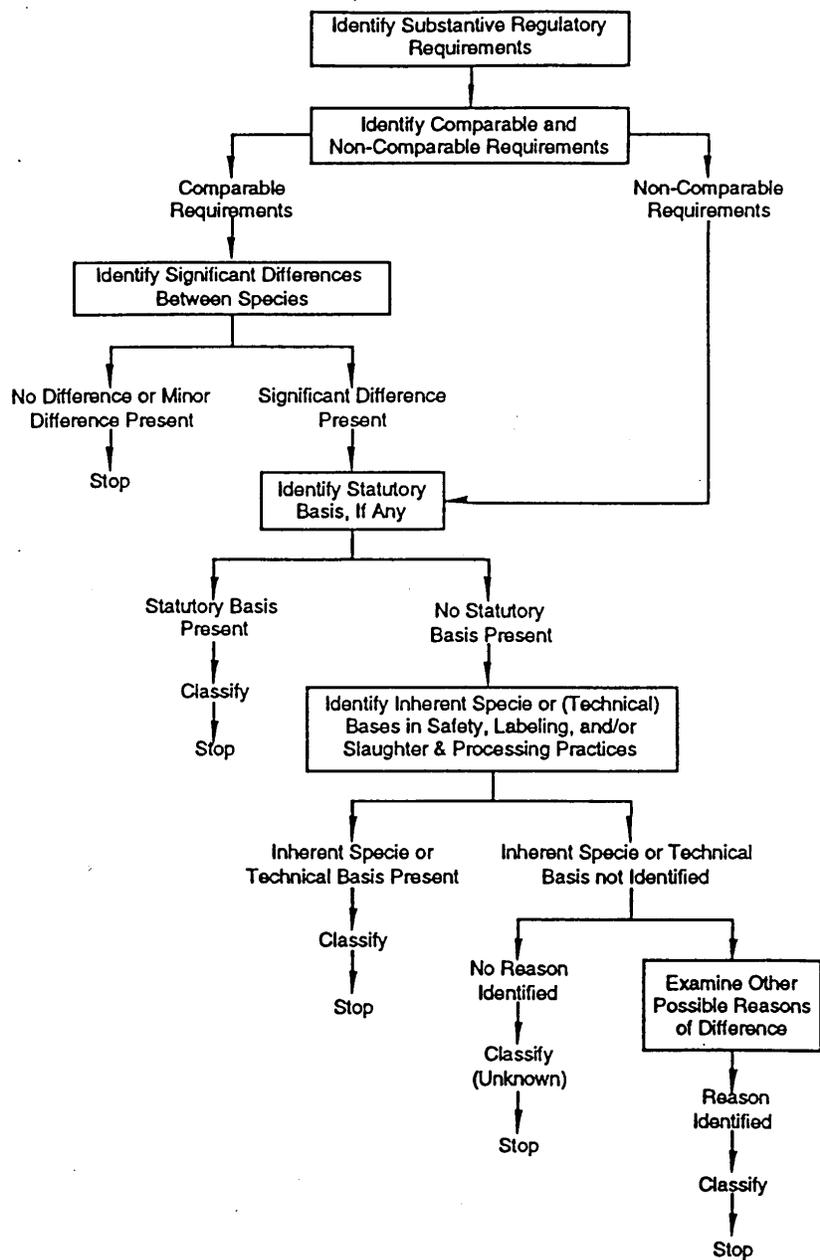


Figure 1. Method of Evaluation

Identify Regulatory Requirements for Meat and Poultry

RTI reviewed Title 9, CFR, Subchapters A (Mandatory Meat Inspection, Parts [301–335]) and C (Mandatory Poultry Products Inspection [Part 381])³ to identify all substantive requirements for meat and poultry, respectively. The substantive regulatory requirements reviewed correspond to 18 specific subject areas, as listed in the Appendix table of contents. All of Title 9, CFR, Subchapters A and C, was included in the study except 9 CFR § 301.1–2, § 302.1–3, § 303.2, § 318.21, § 318.300–311, § 321.1–2, § 331.1–6, § 318.1–7, § 318.153, § 381.185–186, § 318.220–225, and § 318.300–311. These sections were not included in the comparison because the regulations for meat and poultry were essentially identical in composition or the sections were not considered substantive regulatory requirements for comparison purposes (i.e., they were not included among the required subject categories listed in the Appendix table of contents). RTI used FSIS’s Document Issuance Automated Library System (DIALS) to retrieve and download the most current issuance of the CFR.

Division of Comparable and Non-Comparable Meat and Poultry Regulatory Requirements (Part I vs. Part II)

After identifying all substantive meat and poultry regulatory requirements, the RTI staff input regulations into tables using word processing software. The tables were organized by subject category (e.g., “Exemptions”) and visually reviewed for comparability. The meat regulations were left essentially intact, and poultry regulations were electronically matched with the appropriate meat regulation. Any meat or poultry requirement not having a similar counterpart requirement was therefore also identified. Accordingly, the regulatory requirements in each subject category are separated into two pans (e.g., the subject category “Exemptions” is broken into “Exemptions [Part I]” and “Exemptions [Part II]”). Part I contains the meat and poultry requirements with comparable counterparts, and Part II contains the meat and poultry requirements without comparable counterparts.

Identify and Classify Differences of Comparable Meat and Poultry Regulatory Requirements (Part I)

Comparable meat and poultry requirements in each category were then reviewed and their differences identified. If there were no differences (i.e., the regulatory requirements were identical), the meat and poultry counterparts were identified as “same” and no further consideration was given. If differences existed, but the burden on the producer for such differences was deemed insignificant, the meat and poultry counterparts were identified as “minor” and no further consideration was given. If differences existed that were deemed significant, then they were summarized and listed in the table.

For the meat and poultry counterparts with significant differences, a classification was then made as to the “basis for differences.” Any notes or explanations germane to the differences were also included for informational support. The bases for differences were classified in the following order:

1. *Statutory.*—RTI examined the United States Code (primarily 21 U.S.C. § 451–§ 470 and § 601–§ 695) to determine whether each significant difference identified was based firmly on differences in the statutes. If it was, we noted this fact and gave the U.S. Code citation reference. No further consideration was given to regulatory differences based on statutory differences.

2. *Inherent Specie or Technical Differences.*—Significant regulatory differences between species without a clear basis in statutory differences were further assessed to determine any inherent specie or technical-related basis for the differences. Inherent specie differences (e.g., size, weight, age, type/severity/susceptibility of disease, etc.) or variations in safety, inspection, slaughter, processing, or labeling due to inherent specie differences were the primary bases identified. RTI applied a “general acceptance” rule in making these determinations. If we judged that objective and knowledgeable professionals would generally agree that a regulatory difference can be based on one or more inherent differences in specie-related food safety and/or production methods, we stated so. No further consideration was given to differences of this type.

3. *Other Reasons or Unknown.*—For significant differences without apparent statutory, inherent specie or technical basis, other reasons for the differences were explored. The primary reasons identified were traditional or historical industry practices that were codified into the regulations as the two industries grew and developed. Institutional and operational agency bases for differences were also identified.

³ Revised as of January 1, 1992, with ancillaries.

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If no clear basis for a significant difference between meat and poultry regulatory requirements could be identified, then we so noted (e.g., response of “unknown”).

Classify the Basis for Non-Comparable Meat and Poultry Regulatory Requirements (Part II)

For non-comparable meat and poultry regulatory requirements, no differences exist to identify or classify. Instead, for these requirements we classified the “basis for no comparable regulation.” We followed the same evaluative format as was done for comparable meat and poultry regulatory requirements to determine their “basis for significant differences.” In other words, the “basis for no comparable regulation” was identified as (1) Statutory, (2) Inherent Specie or Technical Reason, or (3) Other Reasons or Unknown.

It should be noted that the essential question being answered for non-comparable meat and poultry requirements is much different than the question being answered for those meat and poultry requirements that are comparable. Namely, identifying the “basis for no comparable regulation” (or the reason why there is no meat/poultry counterpart) is not the same as identifying the “basis for differences.” There exist no requirements for which to identify differences. Thus the choice of evaluative bases (1), (2) or (3) for non-comparable requirements will not necessarily be the same as when they are being chosen for comparable requirements.

MEMORANDUM FROM TERRY L. MEDLEY

To: Patricia Jensen, Acting Assistant Secretary, Marketing and Inspection Services
From: Terry L. Medley, J.D., Acting Administrator
Subject: Comparison of Meat and Poultry Regulations

In response to complaints from industry, some of them long-standing, that the Agency is “not regulating meat and poultry equitably,” FSIS contracted out to Research Triangle Institute (RTI) a comparison of the meat and poultry regulations. The report (see last tab) found many differences in the two laws and narrowed down to 12 the areas of the law in which they believed there were significant differences in the regulations.

The Agency (after combining two of the areas to simplify presentation and analysis), has studied these areas of the law to determine whether, in the actual conduct of inspection, they result in an inequitable application of the inspection laws, and, if so, what might be done to mitigate the inequities. The attached paper contains the FSIS analysis of the RTI results and some options for your consideration.

Although in this effort the Agency’s primary focus has been on equity, it has also had to consider the underlying purpose of the laws to assure that all proposed options meet the Department’s accountability for effective meat and poultry inspection as well as for an equitable application of the law. As indicated in Figure 1 there were problems in four areas with how well the Agency was meeting the underlying objectives of the law, and in one of those areas, there were both effectiveness and equity problems. FSIS has assumed in its analysis that the Agency’s responsibility is, first, to assure the objectives of these laws are being effectively met, and, second, to make the enforcement of the laws as equitable as possible.

The analysis helps to clarify the meaning of “equity” as an Agency regulatory responsibility and why there is an appearance of inequity in many instances where actual inequity does not exist. The following factors contribute to the appearance of inequity where none may exist:

- Some differences in the law are justified by the fact that the two industries deal with different animals and have different production processes.
- Some laws may be stated differently, but in application are enforced to the same objective.
- Laws for market protection were designed to protect the markets within each industry, not between them. These laws use industry standards, and the Agency has no authority to reconcile those standards between industries.

Time has obscured the differences in the way the laws originated for regulation of these two industries. Many enforcement standards in the meat laws were generated to protect against changes in certain meat products or bring about desired changes in meat production processes. When the poultry laws were passed at a much later date, many of those changes were already an accepted part of industry practice and were not specified in the law. In most of these areas, the Agency has not interpreted the differences in the law to reflect an intended difference in objectives and has tried to enforce the law to the same end in both industries. Thus, this analysis, in looking at Agency practice as well as the laws themselves, has found that not all differences in the laws result in inequitable regulation.

Tab/Area of regulation	Status of Enforcement			
	No inequity ¹	Inequity ²	Effectiveness question ³	Effectiveness and inequity question ⁴
1. Mechanically separated product				X
2. Humane slaughter	X			
3. Use of skin	X		X	
4. Standards of composition or identity	X			
5. Sanitation	X			
6. Slaughter inspection modernization		X		
7. Cooking/Heating temperatures	X			
8. Removal of contamination		X		
9. Carcass chilling procedures: moisture limitations			X	
10. Exemptions		X		
11. Processed Products: moisture limitations	X		X	

¹Differences in regulations where no inequity was found in the application of the law.
²Differences in regulations where an inequity was found in the application of the law.
³Differences in regulations which raise a question as to whether the law is being enforced as effectively as possible.
⁴Differences in regulations which raise both a question of inequity and effectiveness.

MECHANICALLY SEPARATED PRODUCT

I. Issue

Mechanically Separated (Species) (MS[S]¹)—a meat food product—is strictly regulated as to its preparation, composition, usage, and labeling; mechanically deboned poultry (MDP) is not. These differences raise two policy issues. The first is whether current regulations are adequately protecting consumers. The second is whether different regulatory treatment for these similar substances is justified. The meat industry claims, and has sued the Department on this point, that differences in USDA regulations are unjustified.

II. Background

“Mechanical Separation” and “Mechanical Deboning” are methods of using machinery to separate tissue from meat and poultry bones to produce a very finely ground substance which contains bone, bone marrow, and certain minerals as well as muscle tissue. Before this relatively recent innovation, it was not economically feasible to use these tissues in meat and poultry products.

Mechanically Separated (Species) became the subject of consumer criticism in the mid-1970’s after USDA proposed, in order to equate meat with poultry policy, to allow its use in meat products and let processors label it as beef, pork, etc., without qualification to explain that it was not exclusively muscle tissue. This criticism led to a lawsuit in which the court found that MS(S) was not “meat” within USDA’s regulatory definition and that it was an added substance which must be identified in the product label ingredient list.

After the lawsuit, USDA undertook to resolve three consumer protection issues raised by mechanically separated products.

- Does the product present inherent health hazards?
- Is the product a unique ingredient that should be identified separately to distinguish it from “beef,” “pork” “chicken,” etc.?
- Should use of the product be limited, i.e., should it be restricted to a certain percentage of the foods in which it is used?

As to the first point, scientific studies established no unique health risks associated with the mechanical separation technique. However, it was determined that MS(S) is sufficiently different from muscle tissue meat in consistency and composition to require separate labeling. Usage limitations were also found to be necessary.

These findings led USDA to issue extensive regulations in 1978 which set preparation, composition, usage, and labeling constraints for MS(S) and required that it be produced only under a strict quality control program to be approved by the Agency. This rule assigned a definition and standard of identity for MS(S) which neces-

¹Mechanically Separated (Species) is a generic term. Specific products would include Mechanically Separated Beef, Mechanically Separated Pork, etc. Originally, this product was known as Mechanically Deboned Meat. Other names have been used or proposed over the years. For simplicity, this paper uses only the current term.

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sitated it be listed separately from meat in the ingredients statement of food product labels and on the principal display panel.

Additional rulemaking in 1982 reaffirmed the Department's position that MS(S) was not "meat." USDA further determined it was sufficient for processors to declare this substance in the product ingredient statement unless its use altered basic product characteristics, in which case it had to be identified on the principal display panel.

During this same period, MDP underwent product development separately from MS(S) without USDA regulation. Early distinctions in regulatory treatment were largely due to historical differences in how the two industries used these products and the way in which they came to public attention. One significant difference is that MS(S) was being considered for use in products that had previously contained only muscle meat.

The use of MDP in poultry hotdogs created less controversy. Poultry hotdogs did not exist before they were made with this substance, and consumers had no prior expectations about the formulation. Nevertheless, the same consumer protection issues were applicable to MDP. USDA, during its 1982 rulemaking for MS(S), promised to establish similar rules for the regulation of MDP at a later date. In 1983, the Agency developed, but did not publish in the Federal Register, a proposed regulation for MDP that paralleled the existing MS(S) rule. Continuation of the differences in regulatory treatment of MS(S) and MDP since that time has been attributable to decisions made at political levels in the Department. The effect of those differences has been a reluctance for processors to use MS(S) while MDP use has expanded.

For example, the meat industry has not used much MS(S) in product formulations. It claims that consumers will not buy products if they see MS(S) on the label. Similarly, the poultry industry claims that if they had to label MDP as a poultry hotdog ingredient, consumers will think the product has changed and they would stop buying it. FSIS has no information to verify these assumptions. FSIS has no information to show how much attention consumers pay or will pay to ingredients statements on a label. There is some question as to whether consumers know what mechanically separated/deboned products are.

If, as the two industries contend, people will not buy a product when its ingredients are accurately listed on the label, the current regulations requiring disclosure for MS(S) are clearly needed and consideration should be given to requiring MDP labeling as well. Additional health issues concerning MDP also need further analysis.

Earlier studies concluded there are no unique health risks in the use of mechanically separated product when it is used as an incidental ingredient in meat food products. This finding does not necessarily extrapolate to MDP which is frequently the main ingredient in poultry products. Known issues such as the calcium and cholesterol content of MDP will be resolved when nutrition labeling regulations take effect. Some evidence exists that the meat industry is getting around USDA's extensive MS(S) regulatory requirements by adding MDP to meat food products in what are now allowable proportions of "poultry."

In recent developments, the Agency has been sued by several sausage manufacturers who have argued that imposing labeling requirements on MS(S) while not imposing similar requirements on MDP is inconsistent and inequitable. In response to this lawsuit, FSIS issued an Advance Notice of Proposed Rulemaking (ANPR) in June 1993. The ANPR solicited comments, information, scientific data, and recommendations regarding the need for labeling poultry products produced by mechanical deboning and products in which MDP is used. Over 2,700 responses were received. A little over half the comments favored labeling of MDP, while the remainder did not. No compelling health and safety issues were raised, leaving what is substantially a consumer protection issue wrapped in the cloak of an economic controversy.

Because of the response to the ANPR, on March 3, 1994, FSIS published another ANPR seeking public comments on the Agency's tentative positions in pursuing the development of a proposed rule on the definition and labeling of poultry products produced by mechanical deboning and also by a more advanced mechanical separation system. A proposed rule was also published by FSIS on that date regarding meat products separated by mechanical means more advanced than the previous method of producing MS(S). This proposed rule declares products produced through the use of advanced separation machinery as "meat" without use limitations or specific labeling. Advanced meat/bone separation machinery and recovery systems do not crush, grind, or pulverize bones to remove tissue from carcasses. Such operations must be conducted under a USDA approved QC program. This proposed standard would not affect the current standard for MS(S).

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FSIS received 108 comments on the ANPR regarding MDP and 28 comments on the proposed rule regarding use of advanced separation systems for the production of meat. In compliance with a court order to decide the outcome of these issues, FSIS anticipates issuing a proposed rule on MDP and a final rule on the production of meat through use of advanced separation systems in August 1994.

III. Options

1. Propose regulatory requirements for MDP which are comparable to those for MS(S)
2. Maintain existing regulatory differences in the treatment of MS(S) and MDP.
3. Reassess how USDA should regulate both MS(S) and MDP in light of the new nutrition labeling requirements.

HUMANE SLAUGHTER

I. Issue

Federal meat inspection regulations contain substantial provisions to govern the humane slaughter of livestock. They provide for the characteristics of livestock pens, driveways, and ramps; descriptions of approved methods of slaughter; and procedures for tagging equipment and facility hazards that could lead to the inhumane treatment of animals.

Federal poultry inspection regulations also require the humane slaughter of poultry. The applicable regulation simply states that poultry will be slaughtered in accordance with "good commercial practices" and that birds must have ceased breathing prior to carcass scalding.

These differences in regulations reflect the fact that the statute for meat inspection contains specific requirements for humane slaughter of livestock, but the poultry inspection statute is silent on humane slaughtering.

It has been suggested that the differences in these regulations are resulting in an unjustified economic advantage for the poultry industry.

II. Background

Humane slaughter regulations have two objectives: the avoidance of unnecessary psychic or physical pain to the animal, and the avoidance of harm to human beings or animals that could result from the behavior of an excited animal. These objectives are more easily (i.e., technically and economically) accomplished with small animals like chickens and turkeys than they are with relatively large animals like hogs and cattle. This and the different timing of the passage of the meat and poultry statutes probably account for the differences in the statutory approach to humane treatment. Greater regulatory specification was needed for livestock to help USDA enforce FMIA statutory requirements that amounted to a considerable economic investment for the producers that did not already meet them. By the time the poultry inspection statutes were passed, appropriate humane treatment practices were already established in the industry, and Congress accepted them without including them in the legislation.

FSIS enforces humane slaughter practices in both the meat and poultry industry through facilities and equipment approvals and through in-plant inspection. Although not required by regulation, the slaughter process used by most poultry processors is parallel to that used for livestock, i.e., birds are stunned before they are killed. Other poultry producers, like meat producers, use ritual slaughter methods authorized by the law. Therefore, the Agency does not require additional regulations or a new law for the poultry industry to meet humane slaughter objectives or to correct an inequitable economic advantage for the poultry industry.

Congress passed up at least three opportunities (in 1958, 1967, and 1978) for enacting humane slaughter requirements for poultry parallel to those for meat. However, the increased interest in animal welfare has generated new interest from Congress in animal welfare legislation. One bill, H.R. 649, titled the "Humane Methods of Slaughter Act of 1993," introduced by Congressman Jacobs (D-IN), would provide slaughter requirements parallel to those for livestock. Specifically, the new law would specify that poultry be "rendered insensible to pain by electrical, chemical, or other means that is rapid and effective before or immediately after being shackled or otherwise prepared for slaughter."

USDA has taken a neutral position on the Jacobs bill. It has found no reason to oppose this legislation, but, at the same time, has no evidence that a new law is necessary to correct inhumane handling conditions in the poultry industry.

III. Opinions

1. Ignore the issue. The Department can ignore this issue on the basis that (a) different regulatory specifications are appropriate for different species, (b) USDA is

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presently meeting its responsibility with respect to humane slaughter, (c) FSIS is applying the law equitably to meat and poultry, and (d) there is no economic advantage accruing to the poultry industry as a result of the way the laws are specified.

2. Support new legislation. Alternatively, USDA could support new legislation for humane poultry slaughter that is parallel to that for livestock. New legislation for poultry would provide a regulatory standard which would help FSIS settle disputes if it finds a plant is not using industry-accepted standards. New legislation, like H.R. 649, would not have a significant economic impact upon the poultry industry because most establishments are already using methods required by the bill.

USE OF SKIN

I. Issue

USDA regulations permit the addition of detached skin to poultry products at levels ranging from 8 percent for raw boneless turkey thighs to 25 percent for cooked chicken rolls. Poultry processors are not required to label skin as a separate ingredient unless the amount added exceeds natural proportions of the bird species used, as defined by USDA regulations.

Detached skin may not be added to meat food products. This restriction is based upon the regulatory definition of “meat,” which is described as skeletal muscle tissue “with or without the accompanying and overlaying fat, and the portions of bone, skin, sinew, nerve, and blood vessels which normally accompany the muscle tissue and which are not separated from it in the process of dressing.” [emphasis added]

It has been suggested that the difference in these regulations gives an economic advantage to the poultry industry.

II. Background

The difference in the treatment of poultry and livestock skin in USDA regulations probably is attributable to the fact that poultry skin has customarily been considered to be part of the bird that may be eaten, while livestock skin has not customarily been used for food, except for specialty products such as “popped” pork rinds.

The regulatory definition of meat actually permits a natural level of skin to be left on the carcass, but few processors choose to do so. Thus, the interest in detached skin must indicate that the meat industry would like to use detached skin a “disguised fashion,” as the poultry industry does, as a substitute for muscle meat. Therefore, judging whether or not there is an inequity requires that we explore the two industries’ positions within the total context of their opportunity to substitute cheaper meat or byproducts for skeletal muscle meat, not just for their opportunity to use detached skin.

Although detached skin may not be added to meat products, attached skin and other muscle tissue components are allowed. These include beef cheek meat, head meat, and heart meat. Further, products such as frankfurters may contain a substantial proportion of meat by-products and fat. The amount of fat is not contained in the ingredient statement. Conversely, only poultry hearts, gizzards, and livers may be added to poultry products. It is thus difficult to contend that the difference in regulations with respect to detached skin leaves the meat industry without an equal opportunity to substitute cheaper products for skeletal muscle meat.

The issue that FSIS should be considering is whether the use of non-skeletal muscle tissue substitutes is adequately communicated to the consumer whose expectation is that “meat” and “poultry” are essentially skeletal muscle tissue products.

III. Options

1. Maintain status quo. Use of skin is not the central issue.
2. Require that use of detached skin be shown in the ingredient statement of all meat and poultry products.
3. Initiate a study of whether the consumer has adequate information on all products in which cheaper meat and poultry components are substituted for skeletal muscle meat.

STANDARDS OF COMPOSITION OR IDENTITY

I. Issue

Some meat products have a poultry “counterpart.” For example, chili with beef is paralleled by poultry chili, meat stew by poultry stew, and so on. Although these products may be quite similar except for their livestock species or poultry content,

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USDA standards of composition or identity² for poultry products may require a different percentage of poultry than the same-named meat version requires of meat.

For example, “beef stew” must contain at least 25 percent beef computed on the weight of fresh meat. Poultry stew, on the other hand, must contain 12 percent cooked deboned poultry of the kind used. In this example, standards of composition are computed for raw meat (which will be reduced in weight by processing) while poultry standards are based upon cooked poultry (which has already been reduced in weight by processing). Thus, the real difference between these products is much less than appears from the percentage alone.

II. Background

Both the Federal Meat Inspection Act (FMIA) and the Poultry Products Inspection Act (PPIA) permit the Secretary to issue food standards to protect markets from products which have standard names but have less than the commonly expected ingredients and thus compete unfairly with properly labeled foods.

To accomplish that statutory goal, the Agency bases all of its regulatory standards of composition or identity on pre-existing industry recipes and consumer expectations. For example, poultry stew existed as a standard industry product prior to 1957 when mandatory Federal inspection of poultry began. That recipe was adopted by USDA as a standard. Beef stews, which have been under Federal inspection since 1906, have traditionally been formulated in an entirely different manner, and they have a different USDA standard.

The following evidence refutes the assertion that the different standards for “same-named” items represent an inequitable application of the law.

First, meat and poultry products with identical names are not the same foods, and we have no evidence that consumers see them as interchangeable. In the marketplace, products tend to compete more within their type than across species. For example, a consumer who is shopping for chicken stew may compare a national brand with a store brand but would not necessarily consider a beef alternative. In any case, the standards are each “industry’s” standards and USDA has no authority to reconcile the two standards as an end in itself.

Second, differences between the standards of composition for meat and poultry products are to some extent accounted for by different methods of computing percentages. Apparently higher amounts of meat vis-a-vis poultry in same-named products would be largely offset by a weight reduction of approximately 30 percent as the meat product is processed. This natural reduction brings the percentage of meat and poultry in like products to a comparable level. Furthermore, red meat contains more fat than poultry and more may be needed in a formulation to reach an expected protein content.

Third, although historically USDA has been a gatekeeper at the marketplace door, setting product standards of composition that control and, in some respects limit competition, the role of food standards has been questioned in today’s market. Food standards were originally used to make simple distinctions in the quality of a product type, for example to distinguish preserves from jelly and mayonnaise from salad dressing. As the food processing industry has grown, the number of products in various food categories has increased enormously, and the public has changed its taste for certain ingredients. Established; food standards are increasingly looked upon as preserving some markets at the expense of desirable innovations and consumer interests, and therefore, their future as a viable regulatory tool is in question.

III. Option

Maintain status quo. Meat and poultry product standards of composition are generally comparable at present with most differences accounted for by historical differences in formulation, separate methods of computing percentages, and consumer expectations.

²Standards of composition and standards of identity are the two types of food standards. Food standards are used as labeling mechanisms by both the meat and poultry statutes. Food standards are product names used to protect products whose makeup and composition has been established by industry practice by requiring similar products that differ slightly in recipe to use a different name. Standards of composition identify the minimum amount of meat or poultry required in a product recipe. Standards of identity, on the other hand, set specific requirements for a food’s make-up: the kind and minimum amount of meat or poultry; maximum amount of fat or moisture; and any other ingredients allowed. Therefore, one might consider these standards as “content and labeling requirements.”

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SANITATION—WATER TEMPERATURE

I. Issue

The meat and poultry regulatory requirements on the use of hot water in sanitization differ in that the meat regulations specify how hot the water must be, while the poultry regulations do not. Both the National Livestock and Meat Board and the American Meat Institute have suggested in papers submitted to FSIS that this is economically advantageous to the poultry industry. The organizations have not, however, submitted data supporting their assertions or explanations of a specific inequity.

II. Background

The Federal meat inspection-regulations require the use of 180 °F. water or approved chemicals for cleaning floors, walls, inspection equipment, and other equipment that have become contaminated through contact with diseased carcasses. In addition, butchers and others who handle diseased carcasses and parts are required to use water heated to 180 °F. or approved chemicals for the cleaning of knives and implements.

The poultry products inspection regulations do not prescribe a particular temperature for water needed to clean floors, walls, inspection equipment, or other equipment that may have become contaminated by diseased carcasses. Industry practices would make such a requirement difficult to implement. Presently, the poultry industry is required to sanitize all evisceration equipment after each bird is opened.

III. Options

1. Amend the poultry regulations to require use of 180 °F. water for cleaning equipment and facilities that have contacted diseased carcasses.
2. Make no changes. There is no demonstrable reason to amend regulations, with respect to the temperature of water used for surfaces that may contact diseased carcasses.
3. Broaden the issue beyond diseased carcasses—undertake a review of the need to specify water temperature requirements for purposes of dealing with micro-biological contamination.

SLAUGHTER INSPECTION MODERNIZATION

I. Issue

Current regulations provide for the use of statistical quality control procedures known as Finished Product Standards (FPS) for inspecting young chickens and turkeys that are inspected using slaughter quality control inspection systems. FPS are applied by plant employees to determine if the production process is under control, and the use of FPS is monitored by FSIS inspectors. The use of FPS in the newest inspection processes represents the Agency's intention to modernize inspection by (1) focusing on process control rather than product compliance, and (2) having plant employees apply the systems that control the production process and FSIS inspectors monitor the plant's application of those systems.

FPS allows plants more control over their line speed. The question arises whether the meat industry is being unfairly disadvantaged by not having FPS procedures available to it.

II. Background

FPS have been developed as part of the inspection modernization needed to accommodate changes in the poultry industry, which has evolved and grown significantly in the last few decades. Vertical integration in the poultry industry has resulted in a high degree of uniformity among young chickens and made it possible to increase the efficiency of production lines. Inspection modernization has, therefore, been occurring in some areas of the poultry industry since the early 1980's, and along with it, the use of statistical procedures to control process.

Because of the lack of integration in the red meat industry and the correspondingly lower degree of uniformity among red meat animals, inspection modernization has proceeded at a slower pace than in the poultry industry. Even so, the cattle industry and the pork industry have developed to the point where in the professional opinion of Agency experts more efficient inspection systems that use statistical quality control procedures, to control process such as FPS, can be introduced. The Agency attempted to do this in 1988 by proposing rules for the streamlined Inspection System for Cattle, which included FPS. The system had been tested for some years and was found by an independent team of experts and the National Academy of Sciences to be technically satisfactory. However, the proposal was withdrawn in 1992 in response to political pressure, leaving the industry without FPS. (It has

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been alleged that the Government was “turning inspection over to industry.”) In the judgment of Agency experts, however, statistical quality control procedures, such as FPS, can be implemented effectively in the meat industry and are likely to be a component of future inspection systems.

III. Options

1. Take no action. There is no feasible way to mandate the use of FPS in the livestock industry independent of the Agency’s present, broader effort to modernize livestock inspection by designating sorting and system monitoring responsibilities based on solid scientific data.

2. The Agency, through HACCP and Agency guidelines, can encourage the development and use of FPS by the industry on a voluntary basis.

COOKING/HEATING TEMPERATURES

I. Issue

Generally, FSIS’ policy is that products represented as being cooked must in fact be cooked to a temperature with associated time duration sufficient to destroy pathogenic organisms that may be present. The RTI study noted that cooked poultry products must be cooked to an internal temperature of 160 °F. whereas only a few meat food products must be cooked to a specified—generally much lower than 160 °F. minimum temperature.

II. Background

All cooked poultry products must be cooked to an internal temperature of 160 °F., except for certain partially cooked products labeled as such and cured products which must be heated to a minimum internal temperature of 155 °F. (9 CFR 38.150). Because of the widely acknowledged presence of salmonella and other potentially harmful bacteria in fresh poultry, the requirement for a minimum cooking temperature is generally accepted by the industry, and 160 °F. is an accepted industry standard.

Unless labeled as “baked,” there is no minimum cooking temperature for meat food products generally. If “baked,” a meat product must be cooked to 160 °F. unless it is a pork product, which must be heated to 170 °F. (9 CFR 37.8(b)(10)). Otherwise, only the following three meat products have minimum heating temperature requirements:

1. Pork products that may appear to have been cooked must be heated (or treated in one of the other specified ways) to destroy trichinae.

2. Cooked Roast Beef or Corned Beef must be cooked in accord with a time-temperature chart, with temperatures permitted as low as 130 °F. for an appropriate duration to destroy salmonella.

3. Cooked, uncured meat patties must be cooked in accord with a time temperature chart, with temperatures permitted as low as 151 °F. for an appropriate duration to kill a variety of pathogenic bacteria (e.g. salmonella, E. coli O157:H7 and Listeria Monocytogenes) associated with undercooked or mishandled hamburgers.

Although there are only three regulations on point, Agency labeling guidelines, which supplement the regulations, among other things provide that “ham commodities” are “completely cooked” at 158 °F. Also, a recent Agency policy statement, comparing prescribed cooking temperatures at Federally inspected establishments with those recommended for retailers/restaurants/institutions and for household consumers, generally recommends higher cooking temperatures by retailers, etc., and consumers-where product has been handled more and there are generally fewer controls to prevent contamination or growth of any bacteria that may already be present.

All the minimum cooking temperatures and time-temperature cooking charts were established by notice-and-comment rulemaking on the basis of the best data available to the Agency. The Agency is receptive to petitions for amending its technical regulations if new data demonstrate the current regulations should be changed. The Agency has received no such petitions on cooking temperatures.

There appears to be no basis for asserting that our regulations unfairly benefit one industry over the other.

This issue must be viewed in the context of heightened public concern about pathogens in inspected products because of the E. coli O157:H7 outbreak from hamburger earlier this year and because of lingering suspicions about poultry from the allegations on CBS’ *60 Minutes* a few years ago.

III. Options

1. Take no action. This would be justified on the basis that these are duly promulgated food safety/public health requirements grounded on the best available sci-

entific data. The burden is on those who would change these requirements to provide data showing that the change advocated will improve food safety or provide the same level of public health protection if the change is intended to reduce demonstrable adverse impacts on the industry.

2. Undertake a study, in the context of our Pathogen Reduction Program, to reassess the scientific data that relates cooking temperatures to destruction of pathogenic organisms on all cooked product, and recommend regulation changes accordingly. The results of such a study would not necessarily affect the balance between temperature requirements in the two industries.

REMOVAL OF CONTAMINATION

I. Issue

Meat and poultry carcasses contaminated with ingesta or fecal material are considered adulterated and are to be condemned unless, under inspectors' supervision, they can be reprocessed to remove the contamination. While beef carcasses can only be trimmed, poultry carcasses may be trimmed or washed. The beef industry asserts that trimming, as applied, is inconsistently imposed, and leads to unnecessary loss of product, a problem the poultry industry largely is spared.

II. Background

The Poultry Products Inspection Act provides for removal of contamination ("reprocessing"). The regulations prescribe the methods by which poultry carcasses can be reprocessed. Poultry must be removed from the line of production and washed or trimmed at an approved reprocessing station. To receive approval for a reprocessing station, the establishment must submit in writing to FSIS a description of the proposed reprocessing station, and the proposed equipment to be utilized. FSIS may suspend approval of a reprocessing station if it is found that contaminated product is not being properly reprocessed.

This regulation was promulgated in 1978. Previously, both meat and poultry contaminants were removed by trimming alone. The 1978 rule was based on research conducted by USDA's Agricultural Research Service and the Food Safety and Quality Service, the predecessor of FSIS, supporting the industry's contention that poultry could be adequately reprocessed using the proposed alternative methods.

Subsequently, the poultry industry and USDA have been criticized by consumer groups and others who contend that washing merely removes visible contamination, leaving behind invisible pathogens which still pose a food safety risk and contribute to the spread of such bacteria to other poultry carcasses later in processing.

The Federal Meat Inspection Act does not specify how contamination must be removed from meat carcasses. The regulations provide that fecal material and other visible contaminants be ". . . removed [from meat] in a manner satisfactory to the inspector." Agency policy has always been to require fecal material to be trimmed from meat carcasses.

Recently, the meat industry and USDA have been criticized for not doing a better job of preventing bacterial contamination of red meat. This has led to FSIS' recent imposition of a "zero" tolerance for visible contaminants on red meat carcasses, more rigorous inspector oversight of trimming, and increased industry complaints about waste and lack of uniform enforcement.

The Agency has recently given administrative approval for the use of organic acid solutions in "pre-evisceration carcass sprays." These sprays are applied after hide removal and before evisceration to help reduce the likelihood of bacterial growth. A requirement for antimicrobial treatment, such as a spray, also is included in the proposed enhanced poultry inspection regulations. Inspection policy has been clear that these sprays are not to be used in lieu of trimming where fecal/ingestion contamination is suspected or other visible contaminants are present.

Thus, the meat industry clearly loses more product to trimming than does the poultry industry. So, to the extent trimming is unnecessary, there is a compelling argument to be made for permitting alternatives to trimming for red meat carcasses.

The question is, what is unnecessary trimmings Recent public concerns about microbiological contamination of meat and poultry argue that any increased flexibility permitted in procedures to remove contamination be amply supported by data.

III. Options

1. Rescind the current poultry regulations and limit reprocessing to trimming. Such action would surely be met with strong resistance by the poultry industry. However, those who have criticized the current regulations would be pleased.

2. Amend the meat regulations to permit washing. This could reduce some losses borne by the meat industry and be met with a favorable response by industry.

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3. Announce the Agency is open to consideration of new methods for reprocessing carcasses and that the burden of providing scientific data for any changes to current policies is on those advocating such changes. The Agency is currently conducting research on appropriate methods of removing microbiological contamination. Agency policy on removal of contaminants will be influenced by the results of this research.

CARCASS CHILLING PROCEDURES: MOISTURE LIMITATIONS

I. Issue

The Agency has long considered any weight gain in red meat carcasses attributable to added water to be "economic adulteration" proscribed under the FMIA. This includes any water that may be added during carcass chilling. Poultry carcasses, on the other hand, are expressly permitted to gain as much as eight percent added water as a result of chilling by immersion in water.

The red meat industry asserts this is grossly unfair. One industry estimate asserts that this equates to a greater than one billion dollar competitive advantage given to poultry over red meat.

II. Background

Both meat and poultry carcasses need to be chilled after the animals have been slaughtered to prevent growth of pathogenic and other bacteria, to which animal proteins are particularly susceptible, and degradation of the product.

The poultry regulations expressly require chilling of poultry carcasses to 40 °F. within two to eight hours, depending on the size of the carcass. Although air chilling is permitted, immersion of poultry carcasses in ice and water has long been the industry practice in the United States. In promulgating poultry regulations to implement the 1958 PPIA, USDA started with the current good manufacturing practices in the industry. This included the rapid chilling of carcasses by immersion in "chill tanks" and accommodation of a reasonable amount of water absorption, which is considered unavoidable by that chilling process.

The meat regulations have no express requirements for chilling of carcasses. Because of the size of the carcasses and the much larger volume of meat to exposed surface, immersion in water is not a practical method for chilling red meat carcasses. Air chilling of carcasses in large coolers has always been the industry practice. Because of the larger volume of meat to surface, it may require up to 24 hours of refrigeration to get a carcass thoroughly chilled. Recently, the industry has developed a method of spraying carcasses during chilling to prevent loss of carcass weight due to dehydration. This is permitted by the Agency as long as there is no net increase in weight.

In addressing this issue, the Agency must consider two objectives. The first is to assure that consumers are not being misled by the amount of water in the products they buy. The second is to assure that any regulation limiting water is applied equitably to the meat and poultry industries.

The purpose of regulating water absorption in meat and poultry products is to avoid allowing the industry to unnecessarily increase the weight (and therefore the cost) of the product. What is "reasonable" water absorption for water-chilled poultry carcasses is difficult to define precisely. However, it is clear that the eight percent water absorption that is now the norm in the poultry industry was not anticipated as "reasonable" based on the three to eight percent range established in tests of the chilling process some years ago. There is evidence that producers have pushed chilling technology in the direction of ensuring the maximum allowable water gain instead of in the direction of reducing water gain.

Changing regulations to permit no water gain in poultry would probably require significant changes in processing facilities and have a major economic impact on the industry and the price of poultry, perhaps gaining little for consumers over present regulations. However, on the basis of past tests of the water-chilling processing system, it is likely that reductions in the average absorption of water could be achieved with marginal changes in the process.

While it is true that the poultry industry, under current regulations, has a better opportunity than the meat industry to deceive the public by putting unnecessary water in its product, this does not necessarily mean that the meat industry should be permitted to have more water in its carcasses. To meet its consumer protection objectives, the Department must keep added water in fresh meat and poultry as low as possible within the constraints of the available processing systems. If the processing systems differ, different limits on the amount of water are not necessarily inequitable. The meat industry does not use water chilling. Allowing no water absorption where no water is used or allowing water consonant with the amount used appears to be appropriate.

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III. Options

1. Amend the regulations to further restrict added water in fresh poultry. This might be done in incremental stages. The industry would not consider this a reasonable alternative in view of their present production technologies.
2. Amend the regulations to require some kind of label declaration when fresh poultry contains added water.
3. Relax inspection requirements to permit some weight gain by red meat carcasses if the industry can show additional use of water is necessary during chilling.

EXEMPTIONS

I. Issue

Both the Federal Meat Inspection Act (FMIA) and the Poultry Products Inspection Act (PPIA) have provisions for various exemptions from inplant inspection. In some cases, the statutory exemptions are identical; in others they are different.

The meat inspection regulations contain exemptions from Federal inspection for persons who slaughter livestock of their own raising, the custom slaughter of such livestock by another person or firm, slaughter and processing in any U.S. Territory (Guam, for example) for internal distribution and sale, processing operations of types traditionally conducted at retail stores and restaurants, meat processing at restaurant central kitchens, and the preparation of meat pizzas for service in public or private nonprofit institutions.

Poultry inspection regulations contain the same exemptions from Federal inspection specified above plus additional exemptions for certain enterprises engaged in intrastate commerce only. Another difference in the two regulatory schemes is that poultry regulations contain a clear definition of what constitutes a "poultry product" and is therefore subject to inspection. No parallel section exists to define an inspectable "meat food product."

II. Background

The 1906 FMIA included exemptions for farmers who slaughtered animals on the farm, for retail butchers, and for retail dealers in meat and meat food products. These exemptions were provided to poultry processors in 1957 with passage of the first mandatory poultry inspection statute. Authority to exempt certain products with a meat component was added in 1967 when the Wholesome Meat Act was passed. The same product exemption authority was extended to poultry a year later with passage of the Wholesome Poultry Products Act. The 1967 and 1968 laws also exempted the custom slaughter of livestock or poultry and added new provisions for retail exemptions.

In 1985, an exemption for restaurant central kitchens became law and in 1991 an exemption for certain pizza processors was passed. The last two exemptions are identical in statutory language and were implemented equally. However, the Wholesome Poultry Products Act contains additional exemptions for poultry processing which were not provided to meat processors by the Wholesome Meat Act. For example, the poultry statute and USDA regulations:

- Include slaughter in the list of processing operations which are traditional and usual for retail stores and may be conducted at those locations without inspection.
- Exempt the slaughter and processing of poultry by a producer on his own premises for intrastate distribution by the producer or another party.
- Provide an exemption for slaughter and processing by a producer or other party on his own premises for direct sale to household consumers, hotels, restaurants, and similar institutions.
- Exempt certain small enterprises slaughtering and/or cutting up poultry for intrastate commerce.
- Provide a detailed description of what foods with a poultry component may be exempted from definition as a poultry product, which has the effect of exempting them from inplant inspection.

Although the PPIA does not specifically exempt retail poultry slaughter, FSIS exemption regulations reflect a determination that the slaughter of poultry was, in 1968 when the Wholesome Poultry Products Act was passed, a traditional or usual operation conducted by retail operators and thus exempt from Federal inspection. Conversely, the slaughter of livestock for sale in commerce was not a traditional or usual retail operation in 1967 when the Wholesome Meat Act was passed and that has not been permitted.

The next three poultry exemptions cited above are statutory. The FMIA contains no parallel authority for these exemptions and none can be allowed. Generally speaking, inspection is required unless a specific statutory exemption exists. Since

the exemptions cited above for poultry are mandated by statute, USDA must grant them. Conversely, USDA may not grant parallel exemptions for meat operations because the FMIA does not sanction them.

The remaining regulatory difference is that poultry regulations define exempt products and the meat regulations do not. Both the PPIA and the FMIA provide the Secretary discretionary product exemption authority for foods which (1) have only a relatively small proportion of meat/poultry or (2) items such as sandwiches which consumers have historically not considered to be products of the meat or poultry industry. The statutory clauses are virtually identical.

The lack of meat food product exemption regulations which parallel the poultry product regulations is, however, a significant difference. Poultry processors may refer to USDA regulations for questions about whether a product is or is not subject to inspection based upon the percentage of poultry used in formulation. Meat processors must raise product exemption questions on a case-by-case basis with the Agency, which resolves them based upon policy precedents. In practice, however, meat and poultry processors make about the same number of individual inquiries concerning inspection or exemption regardless of the regulation.

In 1991, USDA was required by Congress to conduct a study of existing meat and poultry product exemptions and of a prospective exemption for wholesale meat outlets which conduct "simple" processing. These studies were conducted concurrently under FSIS supervision of a contract with the Research Triangle Institute (RTI). The RTI study concluded that USDA product exemptions based upon a low percentage of meat and poultry had been administered correctly. However, the study also found that product exemptions based upon consumer perceptions of whether the food was a product of the meat and poultry industry (for example, sandwiches) had not been consistently granted and that a review of all such exemptions presently in effect was warranted. RTI also found that so-called simple processing operations such as cut, grind, slice and repackage were not necessarily low risk and that a blanket exemption was not appropriate.

III. Options

1. Issue "Meat Food Product" exemption regulations. USDA has statutory authority to resolve the regulatory difference by issuing parallel regulations for meat processors. Although this option would resolve an administrative disparity, experience shows that it is not needed to correct a regulatory equity problem.

2. The Exemptions Study has been completed and submitted to Congress. FSIS is considering further options based upon study findings.

PROCESSED PRODUCTS: MOISTURE LIMITATIONS

I. Issue

Processed products include products such as sausages, roasts or cured products prepared from one or more kinds of meat, added water, and/or other ingredients. The Federal meat inspection regulations restrict the amount of water that can be added to many such processed meat products, but the poultry products inspection regulations restrict the added water in few comparable poultry products.

The meat industry suggests that the lack of comparable moisture limitations for the poultry industry gives that industry unfair economic advantage because the poultry industry profits by adding unnecessary water (and therefore weight) to products which compete with meat products in which unnecessary water is not allowed.

II. Background

Moisture limitation regulations were drafted not only to prevent consumers from being cheated by having unnecessary water (and thus weight) added to certain standardized meat products, but also to protect the industry's market. The Agency accepted the industry standards to determine when water was "deceptive." Industry standards were designed to prevent degradation of the product by "unfair" competitors and were not necessarily based on the minimum moisture technically possible.

The differences between meat and poultry regulations with added water restrictions resulted from the differences in the industry and in consumer expectations. The meat products of concern here, which had some history of "economic adulteration," generally had industry standards for moisture that the Department could use to determine when added water was deceptive. The poultry products of concern were mostly new products, without industry standards or demonstrable consumer expectations and about which no complaints had been made.

Determining whether the differences in moisture content regulation between meat and poultry are appropriate requires consideration of two issues: (1) are deceptive practices with respect to added water in processed products in both industries being effectively controlled; and (2) is the law being applied equitably to both industries.

The question raised is whether, under this kind of regulation, consumer protection is independent of or different from, industry standards. USDA meat regulations incorporate industry standards for the definition of “deceptive.” Thus, it could be concluded that poultry industry regulations, if they were promulgated, would likewise adopt prevailing industry standards to define “deceptive.” However, it appears that this issue is moot for poultry since the regulations do not limit moisture in processed poultry products at all. Therefore, FSIS regulations for poultry support neither the consumer protection nor the market protection objectives.

Without regulations for poultry, it is not possible for the Agency to pursue consumer protection objectives, at any level, with respect to moisture in processed poultry products. This is not an industry equity issue, but an issue of Agency accountability to the consumer.

Without regulations for poultry, it is also not possible for the Agency to protect the market for poultry products. This does not appear to be an equity issue between industries. The two inspection laws operate to protect product degradation within, not between industries. There is, however, a possibility of inequity if a meat product with regulatory limits on moisture content competes with a poultry product that has no limits. There is no evidence, however, that this was the purpose of these restrictions which appear to have had primarily a market protection, and only secondarily, a derivative consumer protection objective.

If we take into consideration the empirical evidence of the need for consumer protection for processed poultry products, it should be noted that there are no complaints about these products from consumers. However, most of these products are new, and consumers are not necessarily well informed about the ingredients or their composition.

If we take into consideration the empirical evidence of the need for market protection, it should be noted that in recent years, there has been increasing criticism of these kinds of regulations that protect one part of an industry’s market at the expense of another part that wants to produce slightly different versions of a product that the consumer might want. There is a widespread belief that the role of regulators to protect the “character” of food products, either as a way of protecting industry or consumers, inhibits innovation and competition, and has outlived its usefulness.

In recognizing how the changes in the processing industry have affected this kind of regulation, FSIS has adopted new regulatory approaches for some meat products. When it became apparent that some consumers prefer the increased “tenderness” that is achieved in products with relatively more water (such as ham), the Agency promulgated regulations to permit more than the traditional industry limits in these products as long as the added water is shown on the label. This approach has allowed the Agency to reconcile the two objectives of the moisture limit regulations in meat products. This approach would be appropriate for poultry products and would avoid the problem of determining what is “deceptive” under the dual objectives of these regulations.

III. Options

1. Promulgate regulations for processed poultry products to parallel those applying to the meat industry.
2. Promulgate regulations requiring any added water in meat and poultry products to be shown on the product’s label.

INSPECTION PROCESS FOR CANADIAN IMPORTS

Question. I asked the question about bringing me through the process about Canadian meat coming into the United States. Could you please review this entire process for me?

Answer. It is the job of FSIS to make sure that imported meat and poultry is produced under equivalent conditions and meets our standards.

Principles of Import Inspection

To ensure the safety of imported meat and poultry for American consumers, FSIS maintains a complex, comprehensive system of import controls. That system involves two major activities.

The first is oversight to ensure that exporting countries have inspection controls equivalent to those of the U.S. This includes carcass-by-carcass inspection, which is required of all countries exporting to the U.S. Such countries must undergo a rigorous review process before they can become eligible to export meat and poultry to the U.S. Thereafter, they are reviewed annually by FSIS inspection personnel to assure they maintain equivalent standards.

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The second part of our import control process is reinspection on a statistical basis, of meat and poultry products as they are presented for entry to the U.S. Port-of-entry reinspection is a monitoring program to make sure that the foreign country's inspection system is working properly. All of these products have already been inspected by the approved inspection system in the country of origin.

A country's overall inspection system must be equivalent to the U.S. system. To determine equivalence to U.S. inspection controls, we look at whether a country has the legal authority to impose requirements equivalent to ours. FSIS examines the organizational structure and staffing of the country's inspection program; and conducts an on-site review of the country's inspection operations, including facilities, equipment, laboratories, training, and individual establishments. Equivalent inspection, sanitation, quality, species verification, residue and microbiological standards must be codified in laws and regulations, and must be operating on a daily basis.

In 1992, the U.S. conducted an exhaustive review of the Canadian inspection system and documented its equivalency, noting, in fact, the remarkable similarities between the two inspection systems. These similarities provide added confidence in Canada's meat and poultry inspection system.

Part two of the import inspection system, port-of-entry reinspection, is a further monitoring of the effectiveness of the foreign country's inspection system. As I previously mentioned, meat products exported from Canada must first be inspected and passed by the Canadian system. Meat products are reinspected on a statistical basis at the U.S. port of entry by federal inspectors. Much of this product is further processed in the U.S., and subject to additional U.S. inspection in domestic plants. This includes products such as ground beef and carcasses, which generally are not sold to consumers in that form, but are made into other products in the U.S. under inspection. Therefore, these types of imported products are subject to more inspection than similar domestically produced products. First, it is inspected in the country of origin under an inspection system that is equivalent to that of the U.S. Next, a USDA import inspector at the border reinspects it. Then, it is subject to U.S. inspection when it is further processed. Finally, retail products are subject to checks in commerce by FSIS compliance officers.

Inspection of Imported Meat from Canada

In January 1989, the U.S.-Canada Free Trade Agreement took effect, calling for the removal of trade restraints between the two countries. The agreement encouraged free commerce in meat and poultry, but there were no specific provisions regarding inspection procedures.

Because of the similarities in our respective inspection systems, Canada and the U.S. were committed to extending the same equivalency to systems for reinspecting imported meat. Over the years, we have revised some of the procedures for inspecting imports from Canada, and that inspection process is explained below.

When a Canadian establishment is ready to ship product to the U.S. the plant must file an entry form with FSIS. Until recently, this was done through an Import Field office, but now the entry form is sent by facsimile to an FSIS import inspector at an official import inspection establishment. All of the import inspectors have computers, and the inspector enters the shipment information into the Automated Import Information System (AIIS), which allows us to track the shipment until it enters the U.S., and is presented for import reinspection.

After the shipment has passed Canadian inspection and is certified for export to the U.S., it is transported by truck to the border. All Canadian meat shipments must stop at a FSIS border import inspection station to receive an assignment. The truck may proceed inland to complete the inspection, although almost all inspections occur at the border. We have nine main locations along the Canadian border where meat exports can enter.

When the truck arrives at the FSIS import inspection station, the inspector goes to the computer and gets the specific reinspection assignment for that shipment. Up to this point, no one in Canada or the U.S. has any idea what type of reinspection will be assigned to the shipment. There are three possible types of inspection assignments.

First is an "inspect" assignment. The computer system is programmed to randomly select imported shipments for monitoring. The truck will be unloaded at the border inspection facility, with the exception of red meat carcasses, and the inspector checks the documents, including the export certificate from the Canadian Food Inspection Agency to verify labeling, and perform all applicable reinspection tasks. Generally, for fresh product, such as carcasses and meat cuts, reinspection includes a product examination in which the inspector visually checks for defects and contamination. It may also include taking a sample to send to the laboratory to check for species identification and for residues such as drugs and pesticides. For proc-

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essed product, including ground beef, it may also include checking net weight, condition of container, and laboratory analyses for species, microbiological contamination and food chemistry. Some products, such as ground meat, are subject to microbiological tests for *E. coli* 0157:H7. These products have undergone inspection in the Canadian system, which, like the U.S. system, continuously monitors slaughter and processing, and conducts the same visual and laboratory tests.

The criteria used to determine whether a shipment meets our requirements and passes reinspection is the same for every country that exports meat to the U.S., and it is the same standard enforced in U.S. plants on domestically slaughtered and processed meat.

In doing the “inspect” reinspection assignment, the inspector will randomly choose samples from throughout the shipment. Again, procedures are different for carcasses, which will be explained later. Inspectors are trained to retrieve random numbers from the computer, or another source if the computer is not available. Consequently, every container in the shipment has an equal chance of being selected for reinspection.

The number of samples required for reinspection is in accordance with statistical procedures. That is, they are sufficient to give us a picture of the condition of the entire shipment. If the shipment passes reinspection, the documents are stamped, and the truck moves inland. Again, much of this product goes to domestic, federally inspected plants for further processing, where it is subject to inspection for the third time. If the product is going straight to the consumer, it must state the country of origin on the label.

If the examination of the samples results in a rejection, the entire shipment is rejected, and the entire shipment must leave the U.S. The FSIS inspector enters these results in the computer, and the next 15 shipments of this same type of product from the same plant, equaling at least 15 times the weight of the rejected shipment, will be inspected regardless of where it enters the U.S. This is more restrictive for Canada than the other countries approved to export to the U.S. For other countries, it is only 10 consecutive lots that must pass reinspection. This is called “intensified inspection”, and it is the second type of inspection assignment that a shipment can get at the border.

The third type of assignment that shipments are subject to is the “skip” assignment. This means that the AIIS system did not select this shipment for hands-on reinspection. Overall, FSIS inspects about 1 out of every 9 or 10 Canadian shipments. However, even for a “skip” assignment, the inspector will have the doors of the truck opened and will look at the containers at the back of the truck, check the general condition of the product, ensure that the documents match the shipment, and verify the labeling. If the inspector notices anything wrong, the entire shipment may be unloaded and checked.

Questions have been raised about reinspection procedures for ground beef, especially when it arrives in large containers. These shipments are subjected to product examinations. The inspector randomly selects samples, and visually examines the product. The AIIS may also assign laboratory samples for species identification, chemical residues and *E. coli* 0157:H7.

Over the years, the Agency has strengthened inspection of all imported products significantly. However, there are areas we are continuing to improve. For example, we have implemented a modified approach for reinspecting Canadian red meat carcasses. This should increase everyone’s confidence that carcasses are undergoing proper scrutiny. In the past, we have not required the unloading of the entire shipment of carcasses at the border for selection of samples and reinspection as we do for other imported products. However, the entire load of carcasses has been later unloaded at the destination plant in the U.S. and subject to domestic inspection at that point and during further processing. This strategy was tied to basic food safety rules, which tell us that the more a product is handled, the greater the chance of contamination and temperature abuse, which increases human health risks to consumers. Therefore, it was determined more prudent to unload and reinspect the entire carcass shipment at its final destination.

Under the modified program, the Canadian Food Inspection Agency’s meat inspectors were trained to select samples according to U.S. requirements, mark those samples, and assure they are loaded at the back of the truck. The truck is then sealed with a Canadian Food Inspection Agency seal. When the truck reaches the border, and the load is an “inspect” assignment, the FSIS inspector uses these randomly selected samples. Knowing that some people may continue to be concerned about having the Canadian inspectors select samples, in March FSIS sent two separate teams to several Canadian plants exporting red meat carcasses to the U.S., to evaluate the new procedures. No major discrepancies were uncovered. The new program also includes a verification check at the final destination. USDA inspectors located

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at these USDA inspected plants look at the entire lot, randomly select their own samples, and reinspect them. These results are compared with the results received at the border, when FSIS import inspectors check the samples selected by Canadian inspectors. These comparisons enable us to determine if Canadian inspectors are correctly selecting samples.

INSPECTION PROCESS FOR U.S. EXPORTS TO CANADA

Question. In addition, could you describe step by step the means by which United States meat is inspected as it goes into Canada?

Answer. For the record, I will provide the brochure, "How to Export Meat and Poultry Products from the United States to Canada", which outlines step by step the process by which meat products are exported to Canada. Page 4 describes the Agriculture Agri-Food Canada inspector's duties in examining the exported product. [The information follows:]

[A Quick Reference Guide for the Industry]

HOW TO EXPORT MEAT AND POULTRY PRODUCTS FROM THE UNITED STATES TO CANADA

I. INTRODUCTION

This guide has been developed jointly by Agriculture and Agri-Food Canada (AAFC) and the Food Safety and Inspection Service (FSIS) to facilitate the movement of meat and poultry products across the Canada/United States border. All exported shipments must be presented to an AAFC inspector prior to entering commerce into Canada. Failure to present export shipments for reinspection can result in penalties that may interfere with your business. It is essential that all responsible parties (exporter, importer, Customs broker and transportation company) are aware of the procedures, including what documents are required, by whom and where the inspection takes place.

The information that you will find here is an overview of the export process. The information contained in this guide is subject to change without prior notice. A list of phone numbers (addendum #1) and examples of required documents are available at the back of this reference guide. More detailed procedures can be obtained from AAFC and FSIS headquarters, regional offices and import field offices.

II. PLANT/PRODUCT ELIGIBILITY

All U.S. federally inspected meat and poultry establishments are initially recognized as eligible to export to Canada, unless the facility has been specifically delisted.

There may be restrictions on certain types of U.S.D.A. inspected and passed meat and poultry products, which are listed in the *Export Requirements for Canada*. The exporter is responsible for ensuring that the products destined for export to Canada are produced, stored in, and shipped from a USDA/FSIS inspected facility.

Exporters are advised to check the *Eligibility Status of U.S. Meat and Poultry Plants Exporting to Canada—Delistment List* before preparing product for export. The export requirements for Canada and plant eligibility lists are available through the Export Requirement Library database [To access the system by modem: phone: (202) 501-7608] or by request from FSIS, Export Coordination Division (ECD).

III. REGISTRATION OF PRODUCT LABELS

All prepared meat and poultry products and retail package labels must be registered in advance by AAFC. Product labels intended for retail distribution must be bilingual (French and English.) The labels must include the mandatory labelling features:

- product name,
- country of origin,
- net quantity in metric units,
- list of ingredients, if applicable,
- name and address of the manufacturer or distributor,
- U.S.D.A. official inspection legend,
- storage (handling) instructions, if applicable,
- grading for beef, if applicable and
- grading for poultry carcasses, if applicable.

In addition, these labels must be submitted to FSIS, Food Labelling Division for U.S. label approval.

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Applications should be made to AAFC on AGR 1419, Request for Registration of Labels, Markings and Containers (addendum #2), with a proof of the proposed label attached. For more information on labelling requirements and application procedures, call (613) 952-8000, ext. 4685 or write: Agriculture and Agri-Food Canada, Food Inspection Directorate, Process, Formula and Label Registration Unit, 59 Camclot Drive, Nepean, Ontario, K1A 0Y9 CANADA.

Other shipping container labels on non-prepared products do not need advanced registration by AAFC, but must include the mandatory labelling features listed above. Agriculture and Agri-Food Canada inspectors will check labels on both shipping containers and retail-size packages.

IV. BORDER ENTRY PROCEDURES

A. Prior to shipping consignments of edible meat and poultry products:

1. The U.S. exporter must send the following information by facsimile to AAFC, Ottawa [fax number (613)991-3820]:

—Facsimile cover sheet, Notification of Intent to Import Meat Product Into Canada (addendum #3)

—FSIS form 9135-3 (Certificate for Export of Meat and Poultry Products) and FSIS form 9135-3A (Continuation Sheet), if applicable (addendum #4 and #5, respectively.)

IMPORTANT NOTICE: To avoid duplication of certificate numbers, FSIS form 9135-3 will be numbered according to year. The current certificate (US-CA-95) will be used until December 31, 1995. At that time, US-CA-96 will be available through the FSIS inspector at the establishment.

2. AAFC will review the documents for accuracy and completeness. The accepted copy of FSIS form 9135-3 will be stamped “*preverified*” and returned to the company, along with a AAFC computer generated “*Document Report*”. If the certificate is not accepted, the company will be notified of the reason for refusal. Resubmission must be made on a new FSIS form 9135-3.

B. Once the documents have been preverified, the shipment can proceed to the border with the original FSIS form 9135-3 (and 9135-3A, if applicable) that is signed by a U.S.D.A. veterinarian, the “preverified” copy of FSIS form 9135-3 (and 9135-3A, if applicable,) the original poultry grading certificate (if applicable) (addendum #6.) The company may forward a copy of the “Document Report” with the shipment to expedite passage through the border crossing. In addition, detailed instructions should be issued to the truck driver (addendum #7.)

1. All U.S. meat and poultry shipments must stop at Canada Customs. Trucks will then be referred to AAFC inspection at the border. The U.S. company has the option of using the services of a Customs broker to facilitate the paperwork requirements.

2. The shipment should cross the border within seven (7) work days following preverification of the export certificate. It is the exporter’s responsibility to notify AAFC by facsimile if the shipment is canceled or delayed.

C. The inspection assignment can be obtained in one or two ways:

1. At the Border

The AAFC inspector at the border will validate the shipment documents and generate the inspection assignment from the import control computer system and the import inspection report form (AGR 1422) (addendum #8.) Assignments will be for either a skip or full inspection.

(a) *Skip Lot.*—Following a cursory examination from the rear of the vehicle to observe the general condition of the shipment (transportation damage, incompatible product, container labels, export marks, etc.), the shipment can proceed to the final destination. A copy of AGR 1422 and a copy of FSIS form 9135-3 and 9135-3A (if applicable) will accompany the driver.

If the inspector observes a problem with the shipment, the inspector will override the computer system assignment. Depending on the problem, the shipment will either be refused entry or directed to the designated import reinspection facility for full inspection.

(b) *Full Inspection.*—The shipment will proceed to the designated import reinspection facility for full inspection. A copy of AGR 1422 and the original FSIS form 9135-3 and 9135-3A (if applicable) must accompany the driver.

If the product passes reinspection, the shipment can proceed to the final destination. If the product fails reinspection, product will be refused entry.

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QUESTIONS SUBMITTED BY SENATOR BUMPERS

INDUSTRY COSTS FOR HACCP IMPLEMENTATION IN RELATION TO USER FEES

Question. Now that HACCP is into the implementation stage, do you have any verifiable information about the compliance costs to industry and given those costs, especially for smaller firms, do you think it is fair to also impose user fees on the industry at this time?

Answer. HACCP implementation will begin in fiscal year 1998, however, pre-HACCP sanitation standard operating procedures, SOPS, were implemented in all plants effective January 27, 1997.

FSIS has developed estimates of the cost for industry to comply with a HACCP based system for the Final Regulatory Impact Assessment, which is in the final rule. These estimates inferred a reduction in implementation and operating costs for smaller establishments. I will be glad to provide the information for the record.

[The information follows:]

[CLERK'S NOTE.—The information does not appear in the hearing record but appears in the Federal Register, Vol. 61, No. 144, Thursday, July 35, 1996, pp. 38858–38860.]

The user fee proposal is intended to assure that resources are available now and in the future to provide the level of inspection necessary to meet the demand for such services and maintain consumer confidence, within the balanced Federal budget context.

EFFECT OF USER FEES ON CONSUMER CONFIDENCE

Question. You mention the need to protect consumer confidence. Have you made any analysis of public perception of the meat and poultry industry paying for in-plant inspection? Do they perceive any conflict-of-interest, real or imagined?

Answer. For over three-quarters of a century, USDA has had the authority to charge user fees for overtime and holiday work. In fiscal year 1998, we expect to collect nearly \$90 million in user fees under current law. It is important to note that there is strong confidence in the inspection program and the safety of products, regardless of whether the cost of inspection is covered by user fees or the appropriation. Over the years, there has been no perceived weakness in the inspection program associated with the existing user fees, and the perception is public acceptance of product for which industry pays an inspection user fee.

Question. In what manner might the implementation of user fees affect consumer confidence?

Answer. The implementation of user fees should improve consumer confidence in meat, poultry, and egg products. If industry takes responsibility for the cost of inspection, the Administration could then fully focus its efforts on developing and implementing necessary inspection reforms which would improve consumer confidence in inspected products.

QUESTIONS SUBMITTED BY SENATOR LEAHY

Food Safety and Inspection Service:

(1) In recent years there have been several incidents of tainted meat in the U.S. and abroad which have caused consumers to question the safety of the meat supply. To address these concerns, the Holstein Association, the dairy industry's largest breed registry, is in the process of developing proposals for an inexpensive system to identify and track livestock from the farm gate through processing and distribution channels to the consumer. Such a system could integrate vital herd, handling and human health information to allow rapid intervention when needed to prevent distribution of meat tainted with food borne pathogens.

Congress included report language in the fiscal year 1997 Agriculture Appropriations bill requesting that a National Farm Identification Pilot Program for dairy cows be conducted jointly by the Food Safety and Inspection Service (FSIS) and the Animal Plant Health Inspection Service (APHIS). The program was to be funded out of the FSIS account. It is my understanding that the FSIS has recently announced that it will be soliciting proposals for this project under a competitive bid process in the near future.

(A) Will that solicitation include a call for proposals for animal identification programs?

Answer. On February 27, 1997, FSIS published in the Commerce Business Daily a Request For Proposal for a series of pilot demonstration, animal production food safety projects in the non-fed beef, pork, poultry and sheep areas. The projects are

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intended to demonstrate the application, feasibility and effectiveness of current technologies for controlling contamination with particular emphasis on pre-slaughter pathogen reduction. Animal identification will be a required element of the non-fed beef project. An animal identification element will be encouraged, but not required, in the pork and sheep projects.

(B) In developing that solicitation, did FSIS take into consideration Sec. 1434 of the Research title (7USC 3196) that outlines factors the Secretary should consider in setting priorities for allocating funds for pre-harvest, on farm food safety, or animal well-being?

Answer. FSIS has only contracting authority, and is not covered by the provisions under Sec. 1434 of the Research title (7 USC 3196).

(C) When does FSIS expect to select projects for funding under this solicitation? Answer. FSIS expects to complete selection of the projects in July 1997.

(D) Since the fiscal year 1997 appropriations language directs the FSIS and APHIS to work cooperatively in developing an identification pilot program and APHIS has expertise in this area, would FSIS be able to transfer funds to APHIS to administer such a program, and would you support such a transfer?

Answer. FSIS will administer the animal production food safety pilot projects and will transfer funds to APHIS, as needed, if it is to our mutual benefit in conducting these projects.

AGRICULTURAL MARKETING SERVICE

QUESTIONS SUBMITTED BY SENATOR COCHRAN

USDA PESTICIDE DATA PROGRAM

Question. Last year, USDA information on the Pesticide Data Program provided after the passage of the Food Quality Protection Act and the Fiscal Year 1997 Agriculture Appropriations Act indicated that “the most direct impacts from the lack of funding for PDP will be an insufficient amount of information to adequately meet the data requirements for assessing the diets of infants and children and the probable loss of important pesticide uses for minor crop producers due to the shortage of data to accurately assess the actual dietary exposure.” What is the main purpose of the Pesticide Data Program—to prevent the loss of important pesticide uses for minor crop producers, to provide the EPA with data on residue levels, or to assess the actual dietary risk posed by pesticides, particularly to children and infants?

Answer. In 1991 consumers and producers were alarmed by findings of alar on apples, cyanide on imported grapes, and other food contamination issues. The inability of the Department to respond analytically to these concerns indicated the need to develop comprehensive data bases regarding chemical use on agricultural crops, subsequent residues in foods, and food consumption. In response to consumer and producer concerns over pesticide residues in food, the Department initiated a multi-agency effort in 1991 to collect data to provide a more realistic assessment of pesticide levels in the food supply and to reassure consumers.

The establishment of the Pesticide Data Program (PDP) within AMS gave AMS a critical role in this initiative. PDP has created a statically reliable data base on pesticide residues in food as close to the consumer as possible. The National Agricultural Statistics Service (NASS) was assigned the responsibility of conducting pesticide use surveys. The Human Nutrition Information Service, now part of the Agricultural Research Service (ARS), and the Economic Research Service were assigned responsibilities for analyzing pesticide use and residue data to determine the economic impact of alternative pesticide uses and to estimate dietary exposure to residues.

As stated in our 1991 budget, the twofold goal for PDP is to develop a comprehensive data base on pesticide residues to help ensure the safety of the American food supply and to communicate this food safety information to consumers in the U.S. and to our international trading partners. In order to achieve this goal, we work closely with Environmental Protection Agency (EPA), the Food and Drug Administration (FDA), and the States to ensure that data collected meets multiple data needs. Each user of this data contributes to the understanding of the impact of pesticide residues in our food supply. By having access to AMS pesticide residue data, EPA has been able to more accurately determine exposure and dietary risk to the consumer, which facilitates the approval of safer pesticides of interest to agriculture. Information collected by AMS has assisted FDA by pinpointing areas where closer surveillance may be required as a follow-up to apparent violation identified by PDP.

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In addition, producers can assure consumers of the actual levels of pesticide residues in their food.

Since the program's inception we have had to change some facets of the program to respond to changing food safety concerns. For instance, we expanded the types of commodities tested under PDP to include processed products, dairy products, and grain to address pesticide residue data needs outlined in the National Academy of Science report on "Pesticides in Diets of Infants and Children." With the passage of the Food Quality Protection Act of 1996, PDP data will play a more critical role in the Government's risk assessment process used to evaluate pesticides in the re-registration of pesticides. This Act directs the Secretary to improve collection of pesticide residue data, especially those consumed by infants and children. As the program continues, you can be assured that other changes will have to be made to ensure that PDP responds more effectively to current food safety issues and gives consumers and producers confidence that the food supply is safe.

Question. Why should this be a USDA rather than an EPA Program?

Answer. USDA already has the staff, liaison, infrastructure, and computerized database to effectively manage Program activities. EPA authority requiring the use of contracts in lieu of cooperative agreements restricts the purchase of new instrumentation, which in the end will restrict PDP's ability to adapt new technology to meet the challenges of the future.

As I stated earlier, PDP data meets a twofold goal of helping ensure the safety of the American food supply and communicating that food safety information to consumers and producers. This broad goal is best achieved by AMS, since we are in a better position to identify the data requirements of PDP's multiple users. Each of these users play a critical role in ensuring the safety of the food supply. PDP data coupled with food consumption data permits EPA to conduct more accurate risk assessments. FDA utilizes PDP data to assist them in monitoring compliance with their regulations. Furthermore, PDP data coupled with NASS pesticide use data can lead to improved farm management practices, such as implementation of integrated pest management practices. There have been several commodities where crop rotation, drift, and other technical issues will have to be studied to better understand PDP's data—particularly when residues are detected in commodities on which the pesticides are not registered for use. Also, PDP is being used by the Foreign Agricultural Service and the State of California to support the export of U.S. commodities in a competitive global market. AMS will submit for the record a letter from the Administrator of the Foreign Agricultural Service attesting to the use of PDP data to develop trade relations with Pacific Rim countries and a letter describing how the Department of Food and Agriculture in California has used PDP data.

Question. What have been the results of the Pesticide Program Data since its creation in 1991?

Answer. PDP uses state-of-the-art equipment that can detect residues in the parts per billion. We find detectable residues in 60 to 70 percent of the test samples. However, for many commodity/pesticide combinations, the highest concentrations detected are a small fraction of the currently established tolerances. Over the years, 1.5 to 4 percent of the samples tested contained violative residues; the vast majority are for pesticides having no tolerance on that particular commodity. These data help the Department dispel the notion that pesticide residues are pervasive and at dangerous levels. It also helps maintain food safety confidence to domestic and foreign consumers. I will provide for the Committee copies of the Annual Data Summaries for 1991 through 1994. The 1995 Summary will be published in May 1997. Dietary risk assessments and decisions for re-registration are evaluated on an individual pesticide and commodity combination basis. Over the past 5 years, data have been collected for about 1,000 pesticide/commodity combinations.

Question. Does the EPA use data other than that from the Pesticide Data Program for its risk assessment process and for the re-registration and review of pesticides? In other words, is the Pesticide Data Program EPA's only source of this data?

Answer. PDP is not the only source of pesticide residue data used by EPA. However, over the years EPA has become more reliant on PDP data and today PDP is a critical data source for EPA's risk assessments evaluations. For some pesticide/commodity combinations, PDP data is the only information available to EPA. Data from sources other than PDP include regulatory, enforcement-based programs. The shortcomings of these regulatory programs for risk assessment purposes include: sampling is usually not statistically reliable, laboratory analyses are not performed at the low detection levels required by PDP protocols—rather they focus on residue concentrations near the established tolerances, sample preparation prior to analysis does not necessarily emulate consumer practices, residue detections usually are not confirmed, EPA's Good Laboratory Practices requirements for data quality are not

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required, and evaluation of laboratory competence through proficiency testing programs is limited. To our knowledge, there are no other programs in the world that can produce data for dietary risk assessment in the format provided by PDP that fulfills the requirements of the Food Quality Protection Act of 1996.

Question. Which Food Quality Protection Act mandates are fulfilled only by the continuation of the Pesticide Data Program?

Answer. Title III, Sec. 301 (c) of the Acts states: "The Secretary of Agriculture shall ensure that the residue data collection activities conducted by the Department of Agriculture in cooperation with the Environmental Protection Agency and the Department of Health and Human Services, provide for the improved data collection of pesticide residues, including guidelines for the use of comparable analytical and standardized reporting methods, and the increased sampling of foods most likely consumed by infants and children." PDP, as a result of this provision of the Act, will have a more significant role in providing data needed to evaluate cumulative exposures to pesticide residues with a common toxicological effect and to create a statistically reliable database on endocrine disruptors with the minute detection levels needed to assess dietary risk. No other program in the United States or other countries can generate data of the quality provided by PDP to meet the stringent risk assessments required by the Act.

Question. How many fruit and vegetable crops are being sampled under this program?

Answer. I have attached a copy of a chronological list of 27 commodities which have been included in the Program since its inception. The 11 fruit and vegetable commodities in the 1997 program are as follows: (1) fresh commodities—pears, potatoes—aldicarb testing only, spinach, sweet potatoes, tomatoes, and winter squash; (2) processed commodities—apple and orange juice, canned and frozen green beans, canned peaches, and frozen winter squash—alternating with fresh winter squash. In total, there are 14 commodities in the 1997 program, with no more than 13 being sampled at any time, if wheat, soybeans, and milk are included.

Question. How many States are participating in the program? What is the cost-sharing arrangement in each of these states? Please indicate staffing, equipment, and other related program costs being supported through federal versus state funding?

Answer. There are 10 States participating in the 1997 Pesticide Data Program (PDP) for fiscal year 1997. All States received funding for PDP operations through contracts issued by the Environmental Protection Agency. There are no State cost-sharing funds. The participating States and their proposed funding allocations are: California—\$2,430,000; Colorado—\$85,000; Florida—\$1,060,000; Maryland—\$75,000; Michigan—\$1,090,000; New York—\$1,730,000; Ohio—\$640,000; Texas—\$1,020,000; Washington—\$660,000; and Wisconsin—\$80,000. An additional \$100,000 is still unobligated until the contract cost proposals are finalized in April. There are no equipment costs for the States under these contracts; however, the contracts are supporting all state staffing costs.

Question. What arrangements have been made with the EPA for fiscal year 1997 to continue USDA pesticide data collection activities?

Answer. On February 25, 1997, an Interagency agreement was signed between the Agricultural Marketing Service (AMS) and EPA for \$1,251,000, to continue pesticide data collection activities. These funds will be shared among the USDA agencies participating in the Pesticide Data Program. AMS will receive \$891,000; National Agricultural Statistics Service—\$90,000; Grain Inspection, Packers and Stockyards Administration—\$250,000; and the Agricultural Research Service—\$20,000.

FEDERAL STATE MARKET NEWS SERVICE

Question. For fiscal year 1998, increased funding of \$1.1 million was provided when the Committee became aware of the fact that the agency was facing a massive withdrawal of state support for its cooperative federal-state market news program. Would you please give us an update on this situation, in terms of the number of states which have cut or completely eliminated funding for their market news programs and the impact this has had on your programs, on the agricultural industry, and on related industrial sectors.

Answer. The States that reduced their market news programs include Alabama, Kansas, Mississippi, Virginia, Texas, Kentucky, Wyoming, Iowa, Illinois, and Florida. States where programs were eliminated included California, New York, Washington, Ohio, Arizona, and Maine. To assume the responsibilities of the major state participants, AMS had to add a number of new reporters to its staff to ensure that the coverage of these critical commodities continue. We also undertook a business process reengineering effort that identified a number of initiatives relating to auto-

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mation, customer service and workplace improvement. AMS also plans to create a Customer Service Center in Fresno, California. The continued coverage of the critical markets by AMS benefits the various industries, the consumer, and the states, as the market information they need continues to be included in the nationwide system. AMS has assumed coverage of these markets with the additional funding received in fiscal year 1997. The broader responsibility assumed by federal market news staff has ensured that important market coverage continues and reports are being issued on time.

Question. Has the \$1.1 million been sufficient to enable the Federal program to fill critical gaps as state programs decline?

Answer. Yes, that amount has been sufficient to fill critical gaps.

Question. Are additional funds requested for fiscal year 1998 to address this situation? If not, why?

Answer. No, the level funds received in the fiscal year 1997 appropriation will be sufficient for this purpose in fiscal year 1998.

MARKET COMPETITION/CONCENTRATION

Question. What activities are being funded with the \$400,000 provided for fiscal year 1997 to carry out the recommendations of the Agricultural Concentration Committee?

Answer. The following initiatives for fiscal year 1997 were funded:

1. AMS developed a National Carcass Premium and Discount Report to provide the premiums and discounts paid for slaughter steers and heifers. This report reflects premiums and discounts relative to quality, cutability, and weight of carcasses that the packer is offering for the current week.

2. The weekly Forward Contract Slaughter Cattle Summary Report, developed by AMS, provides the volume of contract and formula priced cattle committed to packers for delivery in a specified month. The information is collected from cooperating feedlots in Texas, Oklahoma, Kansas, Colorado, Nebraska, and Wyoming. Price levels based on the Chicago Mercantile Exchange (CME) are included for cattle contracted on the CME. Cattle feeders can evaluate demand based on the volume of cattle committed to packers.

3. The AMS reporting of boxed beef is being expanded by including data of boxed beef sale commitments covering the upcoming 15 business days, rather than the upcoming 10 business days.

4. The Regional Beef Quality and Yield Report began in early February. The reporting of beef grading results on a regional basis will provide better geographic detail than the current national report allows.

5. AMS is finalizing a daily report for import and export volume data for livestock crossing the borders between the United States and Canada and the United States and Mexico. The report is a cooperative effort between AMS and the Animal and Plant Health Inspection Service.

6. AMS initiated a new report, "The International Meat Review," in January 1997. The objective of this biweekly report is to briefly illustrate the supply and demand factors which influence the export trade of U.S. beef, pork, and lamb meat products, as well as the meat imports from other countries.

7. Reporter positions, as well as support positions, have been added in strategic marketing areas in South Dakota, North Dakota, Nebraska, and Illinois to provide a broader coverage of market information and a more in-depth look at marketing activity.

Question. Out of the additional \$10 million released by the Secretary from the Fund for Rural America for research, extension, and education to counter concentration, food safety, nutrition, and gleaning, what amount will be allocated to counter concentration and what specific activities will be funded?

Answer. These funds are being managed by the Department's Research, Education and Economics mission area. We understand that the Department's Cooperative State Research, Education, and Extension Service is currently accepting grant applications from colleges, universities, laboratories, and research foundations. The \$10 million will be distributed among the four initiative areas—livestock concentration, food safety, disease prevention, and gleaning.

Question. Increased funding is requested for fiscal year 1998 to carry out the recommendations of the Advisory Committee on Concentration: \$500,000 for the Agricultural Marketing Service (AMS) to expand its reporting of livestock and poultry markets; and \$2.3 million for the Grain Inspection, Packers, and Stockyards Administration (GIPSA) to address packer competition and industry structure and poultry compliance. Please summarize the need for these additional funds and what activities will be carried out.

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Answer. Producers need timely, accurate, and precise information to successfully compete in today's global market. There is concern in the industry about the lack of market information, especially for small and medium-sized farm and ranch operations. Lack of transparency of the markets is cited in the advisory committee's recommendations and fairer competition for all participants is needed. To meet the needs of the industry, AMS will need to expand and develop strategic areas of market information and keep pace with changing technology and market structures.

The following activities will be carried out with fiscal 1998 funding:

1. The Secretary's Advisory Committee cited the need for a value-based matrix report to be developed for the cattle industry. This report would provide the economic indicators to help guide producers in supplying products that meet consumer demands. AMS will use the increased funds to work with all industry segments to develop this report.

2. Expansion of auction and direct market coverage of daily trading, focusing on the shifts in marketing patterns, would provide more market information for all market participants. Reporters would be added in strategic locations throughout the major trading areas of the country (Texas, Oklahoma, Kansas, Colorado, Iowa, Wyoming, and the Pacific Northwest) to help provide the basic market coverage that is needed.

3. Staff would be added and new communications technologies adapted to provide for additional cross checking of reported market transactions for cattle and hogs. Additional travel in expanding contacts, especially from the production segment, would be implemented.

4. Expanded reporting of trimmed beef products on a daily and weekly basis to provide greater coverage of beef marketing will be implemented. The meat industry has moved to more processed product marketing and away from commodity products.

5. AMS will continue to develop and implement import and export volume data reports for livestock crossing the borders of the United States and Canada and the United States and Mexico. These reports will include information on volume of cattle, hogs, sheep, goats, and horses, as well as destination for imports.

6. AMS will complete the development of marketing information reports for import of meat items. These reports will include information for beef, lamb, and pork.

7. AMS will strengthen and expand reports to reflect formula and contract specifications for cattle.

8. AMS will expand producer-generated direct hog reports to provide vital cross checks in the marketing of hogs. The recent changes that have occurred in the marketing of hogs, primarily of marketing on a carcass value-based concept, has necessitated the need for more producer input of data relative to marketing specifics.

9. Pork reports would be revised to more fully reflect further processed product rather than commodity product, and to provide greater coverage of pork trading. Additional reports would be developed to reflect cutout data for further processed product and provide the industry with a more accurate reflection of product value.

10. The American Sheep Industry (ASI) is discontinuing publication of their marketing bulletin. This publication included several AMS market news sheep and lamb reports. AMS will develop a weekly publication that will meet the needs of the sheep and lamb industry.

Question. Please provide for the record, by fiscal year, the funds provided for fiscal year 1997 and proposed for fiscal year 1998 to carry out each of the recommendations of the Committee on Concentration and/or to address agricultural market concentration of livestock pricing. What additional funding will be required in future fiscal years to carry out the Committee's recommendations?

Answer.

Fiscal Year 1997 Funding for Concentration/Livestock Pricing Issues

[Total Funding \$400,000]

National Carcass Premium and Discount Report	\$25,000
Forward Contract Slaughter Cattle Summary Report	40,000
Expansion of boxed beef reporting	10,000
Regional Beef Quality and Yield Report	10,000
Import and Export volume data reports	20,000
International Meat Review development	20,000
Reporter and support staff expansion	275,000
Total	400,000

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Fiscal Year 1998 Funding for Concentration/Livestock Pricing Issues

[Total Funding \$500,000]

Slaughter Cattle Matrix Report	\$50,000
Expansion of Auction & Direct Market Coverage	100,000
Addition of staff and support to expand cross checking of reported market transactions	200,000
Expanded reporting of trimmed beef products	20,000
Final development of import and export reports for livestock border crossings	5,000
Final implementation of meat import reports	5,000
Reports to reflect formula and contract specifications for cattle transactions	50,000
Expansion of producer-generated direct hog reports	50,000
Reports to reflect further processed pork product trading	10,000
Development of lamb and wool reports to help replace loss of ASI information	10,000
Total	500,000

The only additional funding that will be required to carry out the Committee's recommendations is for maintenance purposes and any additional request for services to resolve concentration and price discovery issues.

FISH AND FISH PRODUCT INSPECTION

Question. The Fiscal Year 1997 Agriculture Appropriations Act made permanent a provision that domestic fish and fish products produced in compliance with food safety standards accepted by the Food and Drug Administration be deemed to have met any inspection requirements of USDA or other Federal agencies for any Federal commodity purchase program. The USDA opposed this provision. Why?

Answer. USDA opposed the initial legislation because it restricted our ability as purchasing agents to ensure the quality of foods purchased by USDA. We rely on regulatory agencies such as Food and Drug Administration and USDA Food Safety and Inspection Service to ensure the safety of products distributed in food assistance programs. When products are purchased by competitive bid, a determination must be made as to whether a product meets minimum quality requirements described in the contract specifications; such as grade or quality characteristics, fat content, domestic product, and so forth. The initial legislation was subsequently changed to allow end item lot inspection to establish a reasonable degree of certainty that fish and fish products purchased meet all quality requirements. USDA modified existing purchasing specifications to implement the end item lot inspection.

ORGANIC CERTIFICATION PROGRAM

Question. The fiscal year 1998 budget proposes an increase of \$505,000 to continue implementation of the Organic Certification Program. How much is being allocated to the Organic Certification Program for fiscal year 1997?

Answer. AMS is allocating \$490,000 from its Marketing Services account for the Organic Certification Program in fiscal year 1997.

Question. Why has there been a delay in publishing the final rule for the Organic Certification Program? Last year, you reported to this Committee that you expected the rule to be published in 1996. Now you indicate that it will be published in late 1997.

Answer. Implementing the National Organic Certification Program has proven to be far more complex and time consuming than had been anticipated. USDA first received an appropriation for the program in fiscal year 1994 and only then was able to establish a staff to develop the proposed rule and work with the National Organic Standards Board, or NOSB. The NOSB provided the Secretary with program recommendations and reviewed materials to be included in the proposed rule as the national list of allowable materials. At its September 1996 meeting, the NOSB completed its review of the list of materials proposed for inclusion in the organic rule. We anticipate that the proposed rule for national standards for organic products will be published during the late spring of this year.

Question. The prepared testimony indicates that consistent with the National Organic Standards Act, the Department will seek to recover the cost of the program through user fees that will be deposited into the Treasury. With respect to this user fee proposal, why would these fees be deposited into the Treasury rather than being credited to the appropriations account so that the fee collections would be available to cover the costs of the program?

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Answer. The Department's Office of General Counsel has concluded there is insufficient statutory authority to credit fees collected to the appropriations account. Legislation would be required for AMS to retain user fees.

QUESTIONS SUBMITTED BY SENATOR BUMPERS

ORGANIC STANDARDS

Question. We still hear a lot of criticism from farmers due to the delay in implementing Organic Standards as required by law. Can you give us your best estimate on the amount of economic value that has been lost to the organic industry due to the failure to implement standards by the statutory deadline?

Answer. Our early economic analysis determined that the organic industry has grown by 22 percent each of the last six years. We estimate that the implementation of national organic standards will allow the industry to continue grow as fast, or faster, for several more years. Interestingly, the process of developing National Organic Standards Board recommendations and writing the proposed rule seems to have had an energizing effect on the organic industry. The twelve Standards Board meetings and the four USDA livestock hearings have provided a public forum for producers, processors and certifying agents to come together to share ideas about solutions to common problems and to arrive at a mutual understanding about organic standards. These dialogues alone have created a greater cohesion and identification of common concerns within the organic industry.

PESTICIDE DATA PROGRAM (PDP)

Question. Last year we faced a problem in conference in which the House insisted this program should be funded through EPA rather than USDA.

What problems did this cause for the implementation of the program?

Answer. Cooperation between AMS and EPA has been excellent. However, with two agencies involved in providing direction to the States, extraordinary efforts have been made to assure that the communication process works. Although PDP operations were restarted within a week after the issuance of EPA letter contracts to the States on November 26, 1996, all is not ideal. The 3-month hiatus from September through November 1996 resulted in data shortages affecting calculations of national residue estimates for calendar year 1996.

Presently, the Program is operating under staffing shortages within USDA because of the fiscal year 1997 funding delays posed by the Congressionally mandated shift of funds from USDA to EPA. In addition, uncertainty as to whether EPA would be allowed by Congress to transfer funds to USDA to pay for in-house operations caused some staff re-allocations, transfers and disruptions within USDA, early in the year. Although restaffing efforts are underway, USDA is proceeding cautiously until continued program funding for fiscal year 1998 is obtained. Some States also lost staff for these same reasons.

The current staff, with full support from EPA staff, has made extraordinary efforts to maintain the monthly sampling plans for 1997, prepare the 1995 Calendar Year Data Summary for publication in June 1997, and conduct an Executive Steering Committee and Federal/State planning meetings in February 1997. Also, two new States were fully integrated into PDP's sampling system: Wisconsin began sampling all commodities and Maryland (which replaced North Carolina) entered the Program representing the mid-Atlantic region.

There have been program delivery impediments which we would like to share with you. Due to EPA statutory limitations, it was necessary to use contracts to fund the States in this program. Using EPA contract authority instead of AMS' cooperative agreements provided a very rigid operating structure. In the past, AMS' cooperative agreements were issued early in the fiscal year and provided greater flexibility to address changing priorities for sampling and testing by allowing us to reallocate program resources later in the fiscal year. EPA contracts have not been finalized to date, thus providing only 50 percent of the funds under a letter contract, pending finalization of these contracts. The States are continuing to conduct full-scale efforts. Finalization of the contracts is anticipated in June. Also, under EPA contracts, there is no authority to purchase or replace laboratory instrumentation, which is necessary to adopt more efficient technologies for use in PDP.

Question. Has USDA reached an agreement with EPA on funding for PDP for fiscal year 1997?

Answer. On February 25, 1997, an interagency agreement was signed between the AMS and EPA for \$1,251,000 to continue pesticide data collection activities. These funds will be shared among the USDA agencies participating in PDP. AMS will re-

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ceive \$891,000; National Agricultural Statistics Service, \$90,000; Grain Inspection, Packers and Stockyards Administration, \$250,000; and Agricultural Research Service, \$20,000.

Question. How does EPA use the information gathered by PDP?

Answer. PDP data is a primary source of information for EPA's reregistration and special review of pesticides in their dietary risk assessment process. PDP is also essential in the implementation of the Food Quality Protection Act of 1996, which includes provisions emphasizing children's health in pesticide tolerance setting. PDP data for pesticide residues in foods highly consumed by infants and children will be used to assess dietary risk based on the new risk assessment standards stated in the Act. There have been 15 reregistration activities using PDP's data: benomyl, captan, chlorothalonil, chlorpropham, DCPA, dicofol, ethion, fenamiphos, iprodione, mevinphos, quintozene, permethrin, propargite, thiabendazole, and trifluralin. PDP's data were also used in four special reviews: 2,4-D, diazinon, disulfoton, and methyl parathion; and in a pilot study concerning aldicarb in potatoes. In addition to these uses, AMS routinely supplies EPA with PDP data on a case-by-case basis.

Question. How does USDA use this information?

Answer. USDA's Foreign Agricultural Service (FAS) uses PDP data to resolve potential trade issues and to provide an advantage to American products over those of our competitors in an expanding global market, especially the Pacific Rim countries. Attached is a letter signed by the FAS Administrator explaining the importance of PDP in fulfilling a critical USDA mission. Similar use of PDP's data has been made by Departments of Agriculture in the participating States, such as California, as well as to address issues of concern within a State, such as Michigan did to allay fears of possible chlordane contamination of milk.

PDP residue data are becoming an important tool in characterizing Good Agricultural Practices issues which will impact USDA's integrated pest management activities—particularly with regard to minor crops such as fruits and vegetables. Some of the issues for commodities involve pesticide residues resulting from crop rotation, spray drift, and detection of residues in crops for which there is no registered use for a pesticide. AMS and other USDA agencies are studying these issues and their importance in marketing U.S. commodities.

PDP data are used by the Economic Research Service (ERS) to assess economic and production practices related to pest management, the Nation's food supply, and consumers. ERS also used PDP data to assess economic implications of alternative pest control practices.

QUESTION SUBMITTED BY SENATOR LEAHY

ORGANIC CERTIFICATION PROGRAM

Question. I authored the Organic Food Production Act which was included in the 1990 Farm Bill. The Act was a comprehensive piece of legislation aimed at establishing National Organic Standards for labeling organic and setting up a National Accreditation Program to certify organic producers and handlers. In 1992, the Secretary of Agriculture appointed the National Organic Standards Board to develop information and provide guidance to USDA in developing draft organic rules. The Board sent its recommendation to USDA almost two years ago, but we are still awaiting the final release of the draft rules. Does the Department plan to finalize the draft organic rules soon and send them to OMB for final clearance? If so, is there a specific time frame or date when this will happen?

Answer. We anticipate that the proposed rule for national standards for organic products will be published during the late spring of this year.

ANIMAL AND PLANT HEALTH INSPECTION SERVICE

QUESTIONS SUBMITTED BY SENATOR COCHRAN

APHIS SALARIES AND EXPENSES

Question. The budget proposes APHIS staffing reductions affecting certain areas as part of the Administration's personnel streamlining effort.

Please provide the staff year reductions this budget proposes, where these reductions will occur (in Washington or at the state level) and what impact these reductions will have on the following APHIS activities:

- Pest and Disease Exclusion Activities
- Plant and Animal Health Monitoring Activities

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- Pest and Disease Management Activities
- Animal Care Activities
- Scientific and Technical Services Activities
- Veterinary Diagnostics Program

Answer. The President's budget includes a reduction of \$5,480,000 and 349 staff years for APHIS. APHIS will attempt to minimize the staff year reduction impact in the field. Some staff years may be eliminated through attrition in anticipation of the consolidation of APHIS' regional offices. The following table shows the fiscal and staff year impact of these reductions by the activities you have indicated:

<i>Activity</i>	<i>Staff year reduction</i>
Pest and disease exclusion	- 91
Plant and animal health monitoring	- 14
Pest and disease management	- 185
Animal care	- 5
Scientific and technical services ¹	- 39
Others	- 15
Total	- 349

¹ Includes a reduction of 9 staff years attributed to the veterinary diagnostics program.

AGRICULTURAL QUARANTINE INSPECTION PERSONNEL

Question. The budget request increases the agricultural quarantine inspection user fees program (AQI) by \$2.8 million from the fiscal year 1997 level of \$98 million. How many additional inspectors were hired in fiscal year 1996 and how many do you anticipate hiring in fiscal year 1997? Will this increase provide the sufficient number of inspectors needed? How many do you anticipate are needed for fiscal year 1998?

Answer. In fiscal year 1996, 201 inspectors were hired late in the fiscal year. We anticipate hiring 42 additional inspectors in fiscal year 1997. These hires along with normal attrition will allow us to increase estimated staff years in 1997 to 2,140.

These hiring, however, will provide the sufficient number of inspectors only for the immediate future. For example, a major new international terminal will open at JFK International Airport in May or June 1998, for which at least 15 additional AQI officers will be required.

Based on optimum staffing models, we predict that 82 additional inspectors will be needed in fiscal year 1998. While the staff years assigned to the AQI user fee program are being reduced in fiscal year 1998, the actual number in inspectors will increase. This is because of the streamlining efforts that will reduce administrative positions in the field and at headquarters that are also assigned to the AQI user fee program. In addition, we plan to reprioritize certain activities, realign shift coverages, and evaluate commodity risks to shift some existing resources to cover emerging needs.

Question. An increase of \$1.2 million is requested for the appropriated AQI program. The program was funded at a level of \$26.5 million in fiscal year 1997. How many staff years will be devoted to conduct predeparture inspections in Hawaii and preclearance inspections in Canada and Mexico?

Answer.

Location	Fiscal year—	
	1997	1998
Hawaii	138.6	158.6
Canada	4.1	5.1
Mexico	27	27

Question. This Subcommittee provided an additional \$700,000 to support the addition of 21 full-time inspection positions to supplement the resources for agriculture quarantine inspection at Hawaii's direct departure and interline airports. Was this directive fulfilled?

Answer. The conference reduced the increase to \$500,000. This amount supports 14 positions, which we have filled.

Question. What activities has the Department engaged in to test and evaluate new inspection technologies and other methods and hiring arrangements for con-

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ducting preclearance and arriving baggage inspections? Why hasn't the study requested by the Committee been delivered?

Answer. APHIS has made many improvements to enhance our inspection capabilities and achieve significant savings.

We have X-ray machines in place at major international airports and X-ray scanning machines at all foreign-arrival and predeparture sites and continue to expand their use as a screening tool. In recent months, we have reviewed new, highly sophisticated X-ray technology to enhance detection by allowing baggage to be viewed from several different angles rather than the one provided by current machines. We will evaluate new technology for cost effectiveness.

We are introducing the use of pest risk assessment to better concentrate our resources on high-risk activities. At the same time, we have increased the number of computers available for data collection. The data are essential for risk assessments and performance measurements.

We have developed computerized staffing guidelines based on the type and level of inspection performed. We are testing these guidelines now. While we anticipate that some fine tuning may be necessary, we believe these guidelines will ultimately help us to realize some significant cost savings while maintaining the desired level of coverage and agricultural protection.

The Federal Aviation Administration and APHIS are researching an automated baggage inspection system. The system is undergoing extensive tests and has yielded promising results, particularly in the area of tomographic imaging. In a recent test, the analysis software consistently identified objects imbedded in a Styrofoam cylinder. We have contracted for the advancement of analysis algorithms; the development of a unique radio frequency tag and an applicator for attaching the tag to bags; and a method to decrease the requirements for the tomographic reconstruction hardware. We anticipate completion of the prototype sometime during fiscal year 1998 and will test the system in Puerto Rico.

We have revised our organizational structure to establish a 10 to one employee to supervisor ratio. This will result in significant savings not only in Hawaii, but nationwide. In addition, we are examining policies overtime to ensure that APHIS maximizes human and fiscal resources. We have hired technicians and temporary personnel rather than higher graded officers to save costs. Using wide scale video conferencing saves costs and increases training opportunities for our personnel.

The study, requested by the Committee, will be delivered during the week of March 24. We apologize for the delay.

Question. Which new and expanded facilities will you provide with inspection officers? What additional resources will be required in future years to fully staff these and existing facilities?

Answer.

[Dollars in thousands]

Location	Staff-years	Funding ¹
New Facilities:		
Brownsville, TX (Los Tomates Bridge)	4	\$312
Eagle Pass, TX (Eagle Pass 2 Bridge)	3	129
Tecate, CA	2	145
Andrade, CA	1	98
Lukeville, AZ	1	98
Expanded Facilities:		
Santa Teresa, NM (El Paso Work unit)	1	29
Bismarck, ND (Pembina Station and Portal Station)	1	29
Blaine, WA	1	106
Existing Facilities:		
Brownsville, TX	1	29
El Paso, TX	3	110
Pharr, TX	1.5	43
Laredo, TX	6	208

¹ Includes salary, benefits, and non-salary costs.

Question. The budget says the Agency will strive to increase the number of facilities covered, peak periods, extended hours of coverage, and increases in the number of passengers. What is the Agency's goal for each of these areas?

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Answer. APHIS' goal is to cover all foreign passenger traffic facilities as effectively and efficiently as possible during peak periods, and extended hours within available resources. We will evaluate peak period traffic in conjunction with risk assessment survey data to determine the best utilization of staff resources. Hours of coverage will be expanded only if traffic volume and associated risk rises beyond that experienced during existing hours of coverage. APHIS will deal with increases in passenger traffic by conducting additional inspections and improving our targeting efficiency ration (a measure of officers' effectiveness selecting the highest-risk travelers and intercepting prohibited materials, pests, and diseases).

STERILE SCREWORM FLY PRODUCTION FACILITY

Question. Is the facility in Panama, which the Agency plans to use for the production of sterile screwworm flies, a new building which will be constructed or a building needing renovation?

Answer. The production facility in Panama will be a new one, designed and built on a site made available by the Government of Panama. A sugar mill previously occupied the site. A warehouse building, used by the sugar mill, is still in good condition and was incorporated into an existing master plan to store supplies and materials. Other buildings on the site will be razed.

Question. Your budget states that \$6 million from prior balances will be used for the architectural and engineering work and an environmental study for this facility. From which balances will this money come and why did these balances accrue?

Answer. Recent Appropriations Acts have granted APHIS authority to carry over up to 10 percent of the annual screwworm appropriation, to remain available until expended. At the beginning of fiscal year 1997, APHIS had \$3.7 million available from prior years in the screwworm program. These funds were accumulated gradually from program savings over the past three years. For example, at one point sterile fly production at the existing facility in Mexico could not keep up with planned dispersal objectives for technical reasons. As a result, dispersal and shipping costs were lower. In fiscal year 1995, the program achieved savings from devaluation of the Mexican peso. Further, in fiscal year 1996, the program planned to erect a chilled fly center and establish a surveillance program in Panama. These activities were delayed, so funds were carried forward to fiscal year 1997, and are expected to carry forward into fiscal year 1998.

Question. What are the future year costs of this facility?

Answer. We expect annual lease costs of about \$14 million for 12 years.

Question. What other affected nations will be contributing to the architectural and engineering work and the future costs of the facility? What costs will the United States and each of the nations involved contribute?

Answer. The entire project will be funded jointly by the United States and Panama through a joint Panama-US Screwworm Commission.

Panama will be contributing approximately \$800,000 to the architectural and engineering work and is expected to contribute 10 percent of the construction and operating costs of the facility. The United States will contribute the balance of the architectural and engineering work, estimated to be \$5 million and 90 percent of the construction and operating costs of the facility. Panama also contributed the land and \$11 million of infrastructure costs for the facility and screwworm eradication.

If other countries, or groups of countries, in the region detect screwworms at levels that pose a risk to domestic and export markets, they may be able to purchase flies from the Panama facility at levels sufficient to conduct control programs. If this should occur, the Panama-U.S. Commission will take steps to ensure sufficient supplies for the primary objective of barrier maintenance at the Darien Gap. Through collaboration among the Panama-U.S. Commission and nearby countries, the integrity of the barrier can be maintained.

KARNAL BUNT

The President's request for the pest detection program is an increase of \$4.5 million over the fiscal year 1997 appropriated level of \$4.2 million. It also states that the increase would primarily go to the Karnal bunt (KB) program.

Question. I understand that \$500,000 will be used to fund cooperative agreements to examine eradication strategies for Karnal bunt and other probable infestations. Of the other \$4 million requested, how much of this money will be spent on Karnal bunt? What activities will be funded with this money?

Answer. We expect to spend most of the \$4 million on Karnal Bunt (KB). This program increase supports enhanced domestic pest and disease surveys, expanded pest information data bases that will be shared with the States and industry, and the ability to scientifically verify disease and pest free areas or zones.

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The primary focus will be for pest detection surveys to enable APHIS to ensure that the \$10 billion international wheat market remains open. Accurate survey data provides assurance to trading partners that KB is not present in U.S. wheat producing areas. Survey technology developed through pest detection initiatives allows the wheat seed industry to fully adopt preventive practices for keeping the U.S. wheat crop KB free. The increase will support follow up surveys in the previously infected areas and any continuing regulatory activity required.

These same program components, including enhanced domestic program infrastructure, quick and continuous detection survey capability and technology transfer to the States and industry will easily incorporate other agricultural trade significant to pests and diseases. Pest detection will provide the much needed scientific backbone required for expanding U.S. agriculture exports.

Question. If the total \$4.5 million will not be used entirely on Karnal bunt, then what other activities will it be spent on?

Answer. The KB experience shows that we must strengthen our domestic infrastructure to detect and quickly react to plant pests and diseases. \$500,000 of the increase will be used to investigate alternative control and eradication strategies for KB and other potential infestations.

Question. Which countries have not accepted the U.S.'s exported wheat from regulated areas even though they test negative for Karnal bunt?

Answer. Approximately 60 countries have not accepted U.S. wheat from regulated areas, even if grain from these areas has tested negative for KB. But of these countries, only Peru and Venezuela have been asked to accept negative-tested wheat from regulated areas.

Question. If one suspect spore is found in a state, has that state's wheat been refused for export until it tests negative?

Answer. We have yet to experience such a case.

REGIONALIZATION

Question. The testimony indicates that APHIS has proposed a rule setting up the Regionalization framework. What is this?

Answer. APHIS published a proposed rule on April 18, 1996, establishing new criteria for allowing or excluding importations of animals and animal products based on Regionalization of animal diseases and scientific risk assessments. The proposed criteria for animal disease Regionalization establish requirements for importing ruminants and swine, and products of ruminants and swine, from foreign "regions" based on levels of risk. Under the proposed rule, a "region" can be a country, part of a country, or a group of countries combined into a single trading block. The proposed requirements would replace current import regulations that are based on APHIS declaring individual countries free of specific diseases. The establishment of risk-based regional import requirements is consistent with our obligations under the North American Free Trade Agreement and the General Agreement on Tariffs and Trade.

KARNAL BUNT

Question. Would this process be used for Karnal bunt?

Answer. We have convinced many other countries to essentially take a Regionalization approach to our wheat exports. Our National Survey enables us to identify where KB is present and to provide assurance to all trade partners that KB is not present in major wheat-producing areas of the United States.

Question. How will the Southeast be treated under this framework?

Answer. The Southeast will be treated the same as any other region with no bunted kernels. On March 17, 1997, we announced that we were no longer considering taking further regulatory action in the Southeast. We made this decision because no bunted kernels had been found in any samples in that region. We will soon publish a standard for determining the presence of KB that will apply to all parts of the country. Establishing this standard will ensure that all U.S. wheat producers and handlers are treated equitably regarding KB and that U.S. wheat has the necessary certification to remain competitive in global markets. These actions were consistent with USDA's objective to protect the U.S. wheat industry while limiting restrictions to areas where KB disease occurs.

Question. Is the Department promulgating rules for compensation for 1996 and 1997 for Karnal bunt in Arizona? If so, when?

Answer. Yes. We are promulgating several rules for compensation for 1996 and 1997 for KB in Arizona. We have drafted the final rule of the 1995-96 crop season compensation docket. This rule would extend compensation eligibility to handlers of

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wheat that tests negative for KB and participants in the National Survey who have positive finds.

We expect the final rule of the 1995–96 crop season compensation docket to be published by mid-April. Also, we expect the proposed rules for the 1996–97 crop season compensation docket and the 1995–96 seed and straw compensation to be published by early May. It is our intention to publish the proposed rules with a 15-day comment period. We anticipate that the final rules would be published in late May.

Question. What types of research on Karnal bunt is USDA involved in? Please list by agency all research that affects Karnal bunt.

Answer. Although APHIS does not conduct research, the Agriculture Research Service (ARS) is spending an estimated \$370,000 in fiscal year 1997 for KB research at Ft. Detrick in Frederick, Maryland. This research, which is being conducted under strict quarantine conditions, involves pathogenicity tests which are designed to distinguish between KB and the ryegrass smut. ARS also hopes to determine if ryegrass spores are capable of infecting wheat and causing KB. Additional greenhouse testing is planned to determine if various cultivated and wild grasses are susceptible to KB and to the smut found on ryegrass. The Economic Research Service is conducting economic analyses at the request of the Office of the Chief Economist. These analyses consist of an evaluation of the price and trade impacts for U.S. wheat of KB and an evaluation of the economic losses associated with KB for the wheat seed industry. In fiscal year 1998, APHIS will provide ARS with \$500,000 for the review of USDA's phytosanitary policy. Specifically, ARS will analyze the potential for pest outbreaks in the U.S. during the next 5 years, the impacts and risks associated with control measures other than total eradication, and whether total reliance on phytosanitary control is a reasonable long term policy.

Question. Is there a test which can differentiate between Karnal bunt spores and other spores?

Answer. There is a test which can differentiate between KB and all other smuts except ryegrass smut. A smut disease of ryegrass has spores similar in size and morphology to KB. Current DNA testing does not distinguish between the two diseases. This discovery has complicated identification of KB, particularly in areas such as the Southeast, where it is common to plant wheat in combination with various forage grasses, including ryegrass. ARS is conducting pathogenicity tests to distinguish between KB and the ryegrass smut. We expect these tests to be completed by April.

Question. APHIS has stated that the quarantine imposed on Arizona due to the discovery of Karnal bunt in March 1996 was mishandled and was an over-reaction. Since the European Community has less restrictive requirements for phytosanitary certificates, can Arizona assume that APHIS will relax its requirements similar to that of our foreign trading partner's requirements?

Answer. APHIS has never made that statement. Furthermore, the U.S. wheat industry has stated that USDA actions were entirely appropriate and consistent with the urgency of the problem. Now that a year has passed since the original detection in Arizona, we are discussing with our State counterparts and affected industries the need to shift our attention on KB from a quarantine perspective to a grain quality issue. This shift would signify our belief that KB does not cause significant yield loss. We are currently moving in this direction by proposing to ease restrictions based on new information about the distribution and risk of spread of KB. This would include relaxing our requirements on Arizona for wheat export. Under this proposal, which is currently being reviewed by the Office of Management and Budget, we would establish regulated boundaries based on the presence of bunted kernels and take regulatory action on grain movement based on the presence of teliospores. The European Union will accept U.S. wheat if no KB symptoms have been observed at the field and if samples taken before shipment are found to be free of KB.

ANIMAL DAMAGE CONTROL

The President's fiscal year 1998 request is \$23.7 million for the animal damage control operations activities, a decrease of \$3.25 million from the fiscal year 1997 level of \$26.9 million.

Question. What activities including the States/cooperators will be affected by this decrease?

Answer. Technical assistance and control work to prevent and reduce damage caused by wildlife, primarily to agricultural and natural resources, would be reduced. The States most greatly affected by the reduction unless there were increased cooperator funding would be Arkansas, Connecticut, Delaware, Iowa, Minnesota, Pennsylvania, and Rhode Island, which provide little or no cooperator funding. Animal damage control staffing would be reduced by 72. Wolf control work in

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Minnesota would cease unless cooperator funding were forthcoming. Additional impacts to affected States in the Eastern region include likely reductions in the following activities: protection of crops from blackbirds, and problems related to nuisance gulls, Canada goose, and vultures; livestock protection and general technical assistance for nuisance wildlife; assistance with deer problems to property, beaver control activities, and reduced support of the technical assistance hotline for rabies in Vermont.

In the Western region, impacts to affected States would likely include reduced: aerial predator control; training at airports relating to wildlife air strike hazards; and activities to protect threatened and endangered species.

Question. Please provide a list of the states that will be affected by the policy change that all states must provide 50 percent of the cost of all programs beginning in fiscal year 1998.

Answer. The following is a list of States in which Federal animal damage control contributions exceeded cooperator contributions in fiscal year 1996. Because contributed amounts can vary somewhat each year, this list is subject to change as new data for fiscal year 1997 becomes available.

State	Fiscal year 1996—	
	Appropriated	Cooperative
Alabama	\$159,900	\$31,963
Arizona	448,799	265,791
Arkansas	258,890	.....
Colorado	790,480	240,854
Connecticut	9,370	.....
Delaware	10,580	.....
District of Columbia	4,761	.....
Florida	151,950	78,743
Idaho	936,144	411,400
Indiana	96,700	21,513
Iowa	68,960	4,361
Kansas	75,000	33,804
Louisiana	361,600	221,520
Maine	135,700	45,320
Maryland	90,459	71,885
Massachusetts	75,897	36,450
Michigan	97,800	28,855
Minnesota	242,500	96
Missouri	103,440	54,063
Montana	973,500	547,194
Nebraska	393,874	332,556
Nevada	814,872	619,852
New Hampshire	175,306	68,549
New Mexico	1,242,585	1,098,776
New York	119,634	115,898
North Dakota	772,052	331,948
Ohio	148,900	70,000
Oregon	974,440	724,621
Pennsylvania	79,178	.....
Rhode Island	8,433	.....
Utah	996,992	840,175
Vermont	61,594	39,710
Wyoming	1,006,781	471,136
Total	11,887,071	6,807,033

Question. How would the proposed 50 percent cost-share requirement be implemented?

Answer. Under this proposal, APHIS would provide no more than 50 percent of total Federal and cooperative program costs in any State. Based on the most current Federal/cooperative contribution data available, Federal contributions would be provided on a limited basis from neighboring States, in States where the cooperative

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contribution is little or nothing. However, limited technical assistance would continue to be available on a limited basis.

Question. Was funding provided for cattail management and blackbird control efforts in North and South Dakota and Louisiana as directed in the fiscal year 1997 Senate Committee Report? How much? Is this included in your fiscal year 1998 baseline? Please provide a brief explanation of APHIS' accomplishments in this area.

Answer. Cattail management activities are ongoing in North Dakota. APHIS expects to treat about 4,500 acres during fiscal year 1997. Blackbird control activities are ongoing in North and South Dakota. In Louisiana, blackbird control activities are taking place in Evangeline, Vermillion, Acadia, Allen Calcasieu, Cameron, Jeff Davis, and St. Landry Parishes.

During fiscal year 1997, APHIS will spend approximately \$100,000 towards cattail management in North Dakota, and approximately \$368,000 towards blackbird control in North and South Dakota. An additional \$150,000 is expected to be spent in Louisiana during fiscal year 1997, toward blackbird control. Funding for cattail management in North Dakota, and blackbird control in North and South Dakota and Louisiana is included within the fiscal year 1998 budget request at approximately the same levels as fiscal year 1997.

During fiscal year 1996, 5,757 acres of cattails in North Dakota were treated with an EPA-approved herbicide. This reduces the amount of blackbird roosting and nesting habitat by controlling cattails. By making the habitat unattractive, blackbirds are forced to seek suitable roosting and nesting sites away from sunflower fields. Pyrotechnic devices were also provided to producers in areas where blackbird damage to sunflowers was severe. In Louisiana, APHIS was assisted by the Louisiana Rice Growers Association, the Louisiana Department of Agriculture, and Louisiana State University, with contributions of supplies, equipment, and staffing, to control blackbirds in rice-producing areas throughout the State.

Question. The Senate report for the fiscal year 1997 Agriculture Appropriations Act included an additional \$125,000 for the beaver damage control in Mississippi. Please provide a brief explanation of APHIS' accomplishments in this area. Is funding included in the budget to continue this work?

Answer. APHIS' 21 beaver control specialists provide assistance throughout the State of Mississippi, including the Delta National Forest. Cooperative funding for the beaver control program in Mississippi will total approximately \$763,000 during fiscal year 1997. Recent accomplishments include 1,863 projects in which the following resources were protected: timber, crops, turf and ornamental plants, dams and levies, irrigation systems, and roads and bridges.

APHIS will spend a total of approximately \$275,000 toward beaver damage control assistance in Mississippi during fiscal year 1997, including the Congressionally directed \$125,000. The fiscal year 1998 budget request includes funding for beaver control assistance at approximately the same level as fiscal year 1997.

Question. The Senate report for the Fiscal Year 1997 Agriculture Appropriations Act maintained funding for the cooperative agreement with the Hawaiian Sugar Planters Association for rodent control in sugarcane and macadamia nut crops. Please provide a brief explanation of APHIS' accomplishments in this area. Is funding included in the budget to continue this work?

Answer. APHIS has established a field office and developed improved methods of using rodenticide baits for controlling damage in macadamia nut orchards. Introduced rats that have maintained high populations in orchards and a variety of other habitats have caused the damage. Studies of rat movements using radio-telemetry and fluorescent dyes established that placement of bait in trees resulted in increased bait acceptance and specifically targeted the animals feeding on the growing macadamia nuts.

During fiscal year 1997, APHIS will spend approximately \$240,000 towards rodent control in sugarcane and macadamia nuts, and anticipates providing a similar level of support in fiscal year 1998.

Question. The Senate report for the Fiscal Year 1997 Agriculture Appropriations Act included funding to continue depredation efforts on fish-eating birds and other species which cause damage to the commercial fish industry in the mid-South. Please provide a brief explanation of APHIS' accomplishments in this area. Is funding included in the budget to continue this work?

Answer. We continue to reduce fish-eating bird damage to the aquaculture industry. APHIS has assigned three wildlife biologists in Florida, Mississippi, and Alabama to provide assistance and equipment to aquaculture producers. These include catfish farmers in Alabama, tropical fish and catfish farmers in Florida, and bait fish and catfish farmers in Arkansas. APHIS is expanding activities by providing

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additional assistance to catfish and crawfish farmers in Louisiana and trout farmers in Pennsylvania.

The fiscal year 1998 budget includes funding to continue aquaculture assistance activities at approximately the same level as will be provided during fiscal year 1997.

Question. The Senate report for the Fiscal Year 1997 Agriculture Appropriations Act continued funding at the fiscal year 1996 level for the Jack H. Berryman Institute of Wildlife Damage Management in Utah and the Monell Field Station in Pennsylvania. Please provide a brief explanation of APHIS' accomplishments in these areas.

Answer. The Jack H. Berryman Institute works to improve and resolve human/wildlife conflicts through education, outreach, and research. Research efforts at the Institute have been directed at a number of problems, including bird/aircraft strikes, deer/automobile collisions, bird depredation at aquaculture facilities, predation of ground nesting birds, predator control to protect livestock, and deer damage to agricultural crops. During 1996, the Institute added 13 new research studies to accompany 57 on-going studies.

The Institute also supports the work of 17 faculty members who teach 7 different wildlife damage management classes. Also, the Institute supports the work of 33 graduate students.

Outreach efforts conducted by the Institute include conducting public attitude surveys regarding wildlife and wildlife damage and the development and dissemination of wildlife damage management literature.

The Institute continues to develop wildlife damage management professionals. Since the inception of the Institute, 22 students have obtained graduate degrees. At least 6 graduates have been employed by APHIS, and several others by the International Association of Fish and Wildlife Agencies, the U.S. Fish and Wildlife Service, and the National Biological Survey.

Research conducted at Monell has provided a foundation from which the National Wildlife Research Center has been able to pursue additional specialized research specific to the needs of the animal damage control program. A recent example was the development of an effective grape flavored taste aversion substance called methyl anthranilate. It is now labeled for use as a bird repellent in water and on turf areas.

Question. Is funding included in the budget to continue this work?

Answer. APHIS provides \$35,000 per year in support of the Jack H. Berryman Institute, and approximately \$212,000 per year for an academic development program at Utah State University. APHIS continues to spend about \$80,000 annually to support the Monell Research Field Station in Philadelphia, Pennsylvania. APHIS has included funding in the fiscal year 1998 budget request for all of these efforts at about the current level.

Question. The Senate report for the Fiscal Year 1997 Agriculture Appropriations Act directed the Department to maintain the animal damage control office in Vermont. Please provide a brief explanation of APHIS' accomplishments in these areas. Is funding included in the budget to maintain this office?

Answer. APHIS continues to maintain the animal damage control office in Vermont. Through this office, APHIS employees serve in an advisory capacity on rabies task forces to help plan rabies management efforts. This office also offers a cooperatively established toll-free rabies information hotline to address public concerns regarding the northward spread of the mid-Atlantic strain of raccoon rabies. APHIS, in cooperation with the Vermont Departments of Fish and Wildlife, Health, and Agriculture, responded to nearly 3,400 phone calls regarding rabies in Vermont in fiscal year 1996.

As Vermont is one of the States in which Federal contributions exceed those of cooperators, support for animal damage control efforts in Vermont would be reduced as a result of the requested decrease in funding for fiscal year 1998 unless additional cooperator funding is forthcoming. The Vermont office would be maintained to provide continued advice on task forces for rabies management efforts, but the toll-free rabies hotline would be discontinued without more cooperator support.

BRUCELLOSIS ERADICATION PROGRAM

Question. The fiscal year 1998 budget request for the Brucellosis Eradication Program is \$19.9 million. This program is being decreased by \$1.7 million from the fiscal year 1997 level of \$21.7 million. The Agency's goal is to eradicate brucellosis by the end of the calendar year 1998. What activities will APHIS carry out in the Greater Yellowstone Area? How much money is designated for these activities?

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Answer. APHIS will continue to work with and assist the National Park Service and the State of Montana with the implementation of the Interim Bison Management Plan and with brucellosis management actions in the long-term bison management plan when it is finalized. The Agency will provide full-time veterinarians and part-time personnel to assist with liaison, planning, bison capture, testing, sampling, and research activities. APHIS will also provide regional and national staff assistance and advice to the Greater Yellowstone Interagency Brucellosis Committee and other ongoing efforts concerning brucellosis in the Yellowstone Area, including environmental impact statements and environmental assessments.

Additionally, the Agency will continue to provide resources for several ongoing brucellosis research projects including an interagency research project to evaluate the transmission of brucellosis in bison within Yellowstone National Park (YNP) and a research project to study the safety and efficacy of RB51 Brucella vaccine on pregnant YNP bison. The Agency will also fund new research proposals designed to gather information which would supplement current brucellosis eradication procedures for use by bison managers in YNP.

In fiscal year 1998, APHIS has agreed to provide bison handling facilities to the State of Montana for the capture and testing of bison migrating from the Park. The Agency has also offered assistance to the State of Wyoming to monitor the commingling of elk and cattle and to provide brucellosis vaccine to local livestock producers.

At the fiscal year 1998 funding level of \$19.9 million, APHIS will provide \$400,000 toward brucellosis control, monitoring, and eradication activities in the Greater Yellowstone Area and \$300,000 for several brucellosis research projects in bison and elk.

Question. The Secretary of Interior announced that the herds in Yellowstone should be vaccinated. Will APHIS assist in this activity?

Answer. Yes. APHIS has offered assistance in any brucellosis eradication activities, including vaccination, neutering, testing or other surveillance activities, which are undertaken in Yellowstone National Park, Grand Teton Nation Park, the National Elk refuge, or Wyoming elk feedgrounds.

Question. Once the Agency has completed the eradication of brucellosis, will you need appropriated funds to carry out some sort of maintenance program?

Answer. Yes. Surveillance activities need to continue for approximately five years after brucellosis is eradicated in the United States to ensure that no foci of infection have gone undetected. A reduced level of appropriated funds would be required for these surveillance activities.

Question. It was reported that a group in Montana claimed that USDA promised the state of Montana would not lose its brucellosis-free status if bison are allowed to roam in the state. Does this claim hold any truth?

Answer. To maintain the Brucellosis Class-Free status the State must comply with the conditions of the interim bison management agreement which requires that the State of Montana and the National Park Service prevent the movement of bison from YNP and the Brucellosis Management Areas (BMA's). The BMA's were established to reduce the number of migrating bison being killed. Additionally, the State of Montana must maintain an active brucellosis surveillance program and detect no source of the disease in the State to remain in the Brucellosis Class-Free category.

GOLDEN NEMATODE

Question. Is there a need to expand the golden nematode quarantine and survey program in the Northeast?

Answer. No, there is not. The current quarantine area encompasses all areas in the Northeast that are infested with or have been exposed to golden nematode.

Question. If so, why is the program decreased in fiscal year 1998 by \$9 million?

Answer. The decrease we are proposing for fiscal year 1998 amounts to only \$9,000 and will not affect the level of program delivery. This decrease is comprised of a \$14,000 decrease for streamlining and a \$5,000 increase for pay costs.

MEDITERRANEAN FRUIT FLY

Question. APHIS announced in the Federal Register on September 10, 1996 that the Mediterranean fruit fly has been eradicated in the areas in California and that the quarantine restrictions are no longer needed. Is the decrease proposed in the fiscal year 1998 for the fruit fly exclusion and detection activities due to this announcement?

Answer. No, it is not. The decrease proposed is for the program's share of the reduction in Federal employment costs. This decrease is comprised of a \$320,000 decrease for streamlining and a \$129,000 increase for pay costs.

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BOLL WEEVIL

In the Fiscal Year 1997 Agriculture Appropriations Act, a boll weevil eradication loan program was initiated at a program level of \$35 million. The fiscal year 1998 budget proposed to terminate this loan program. The Secretary must promulgate regulations for the fiscal year 1997 loan program, but has not yet done so.

Question. The thought was that a loan program would be a less costly way to increase funding for boll weevil eradication. Does the Department not share this view. Why?

Answer. The program regulations are being developed by the Farm Service Agency and they are under review. Since the program is controversial in some regions due to possible environmental impacts, the Farm Service Agency is currently working with APHIS to develop an environmental assessment to address these concerns. The proposed regulation is expected to be published, for comment, in the near future. Once the comments have been addressed, the implementing regulation will be published.

The President's budget requests \$6.45 million for the Boll Weevil Eradication Program. This is a decrease of \$9.8 million from the fiscal year 1997 appropriated level of \$16.2 million. Several areas of Mississippi, Louisiana, Arkansas, and Texas which have not previously participated in the eradication program will be entering into the program next year.

Question. How many new acres do these areas encompass?

Answer. Areas that will begin program operations in August 1997 include: 450,000 acres in the hill section of Mississippi; 125,000 acres in the Red River Valley of West Louisiana; 6,000 acres in southwest Arkansas; and 136,000 acres in the St. Lawrence area of west Texas. Areas that will begin program operations in fiscal year 1998 include: 200,000 acres in southwest Tennessee; 260,000 acres in the south delta of Mississippi; possibly 25,000 acres in New Mexico; and possibly two areas in Texas and Oklahoma totaling 1.06 million acres.

Question. Will your budget request support the initial startup costs in all these states adequately?

Answer. Yes, it will. Although we will be providing less funding in fiscal year 1998, the States will offset our reduced contribution by contributing a greater portion in fiscal year 1998, as they had agreed to in each State's referenda. Therefore, our budget request would adequately support initial startup costs when combined with an increased share from the States.

BUILDINGS AND FACILITIES

Question. The budget request includes a decrease of \$3.2 million for a one-time construction project provided in fiscal year 1996. Which project are you speaking of and why are these funds not required?

Answer. The \$3.2 million provided in fiscal year 1997 is for APHIS' share of the Plum Island Animal Disease Center modernization project, which is an ongoing project with ARS. In the past, the Appropriation Committees have asked us to justify all construction projects. Even though this was a project in fiscal year 1997, we justified it again for fiscal year 1998. In fiscal year 1998, we have requested another \$3.2 million, along with \$5.0 million requested by ARS, to fund APHIS' share of the ongoing modernization project at Plum Island Animal Disease Center. Funds will be used to upgrade electrical and structural deficiencies and to address safety and environmental issues.

HORSE PROTECTION

In the Senate report accompanying the fiscal year 1997 agriculture appropriations bill, the Committee directed the Department to provide more effective use of funds for the enforcement of the Horse Protection Act, to establish programs and policies for conducting horse show inspections and other related enforcement activities to USDA-certified horse industry organizations.

Question. Please provide a brief explanation of APHIS' accomplishments in these areas. Is funding included in the budget to continue this work?

Answer. We have drafted a strategic enforcement plan. This plan places increased regulatory authority and enforcement responsibilities on USDA-certified organizations. We developed the plan with the advice and equine expertise from both APHIS veterinarians and horse industry organizations.

We are now finalizing the plan. We revised the draft to incorporate information gathered from all sectors of the horse industry, as well as three public forums held in 1996. Federal Register comments, and write-in campaigns. Departmental review should be complete in March 1997. After making any necessary revisions, we will

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make the plan available to the horse industry to seek a final consensus. The proposed budget will allow us to continue in this effort.

NATIONAL POULTRY IMPROVEMENT ACT

Question. The fiscal year 1997 Agriculture Appropriations Senate report directed the Department to enhance the fiscal year 1997 funding for the National Poultry Improvement Program which is funded in the "Animal health monitoring and surveillance" account. Please provide a brief explanation of APHIS' accomplishments in this area. Is funding included in the budget to continue this work?

Answer. To enhance the National Poultry Improvement Plan (NPIP), APHIS increased the NPIP funding allocation from \$240,000 to \$260,000 in fiscal year 1997. APHIS plans to use the additional funds to hire an epidemiologist who will spend 50 percent of their time on the NPIP program and 50 percent on activities related to general poultry diseases.

Yes, \$260,000 is included in the fiscal year 1998 budget as part of the Animal Health Monitoring and Surveillance line item.

NOXIOUS WEEDS

The fiscal year 1997 Agriculture Appropriations Senate report directed the Department to include funding at the fiscal year 1995 level to continue its work on the eradication of goatsrue in Utah, to continue its efforts to control tropical soda apple in the Southeast, and to work with the Hawaii Department of Agriculture to secure environmentally safe controls for alien weed pests.

Question. Please provide a brief explanation of APHIS' accomplishments in these areas. Is funding included in the budget to continue this work?

Answer. In fiscal year 1997, we transferred \$100,000 to Utah State University, to conduct eradication activities in Cache County, Utah. Currently, we have a 5-year plan with the State of Utah to conduct post-eradication surveys to verify eradication. During this process, we provide technical expertise to the State. We have included \$30,000 in our fiscal year 1998 budget for this work.

To address outbreaks of Tropical Soda Apple (TSA) in the Southeast, we are concentrating on education, survey, and management of incipient infestations. In fiscal year 1996, we conducted surveys on properties in most States that have received cattle, bahiagrass, or composted manure from infested sites in Florida. As a result of these surveys, we have confirmed outbreaks in Alabama, Georgia, Mississippi, North Carolina, Pennsylvania, South Carolina, Tennessee, and Puerto Rico. In all instances, the confirmed infestations have either been eradicated or are under intensive management for eradication. We have included approximately \$100,000 in our fiscal year 1998 budget to continue this work.

Regarding alien weed pests, we are cooperating with the U.S. Forest Service, and several agencies from the Interior Department to bolster our protection of managed and natural ecosystems in Hawaii from introduced invasive plants. To deal with this issue, we are training our personnel as well as State personnel in Hawaii. Also, we are working with the State to establish a Hawaii Weed Team. This Team will cooperate to enhance effectiveness in preventing and controlling weeds in Hawaii. In addition, we are working with State officials to create a Hawaii Weed Detection and Reporting Network, which would include plant collectors, botanists, and weed scientists. This Network will ensure that the Hawaii Weed Team learns about new infestations so early actions can be taken when eradication is still feasible. We have included approximately \$30,000 in our fiscal year 1998 budget for this work.

ERADICATION OF KUDZU

Kudzu is a big problem in Mississippi. It is a nuisance because it takes over any vegetation in its path. Foresters find this weed to be extremely difficult to control with the current land management practices available to them.

APHIS has never been involved in any activities which would eradicate this weed. Kudzu is not listed (an official process that involves scientific review and publication in the Federal Register) as a noxious weed. The Federal Noxious Weed Act of 1974, 7 U.S.C. 2801-13, defines a noxious weed in part as a "plant which is of foreign origin, is new to or not widely prevalent in the United States, and can directly or indirectly injure crops." This Act provides APHIS' authority to eradicate or control noxious weeds.

Question. Is the definition of a noxious weed the only impediment that stops APHIS from getting involved in ways to eradicate Kudzu?

Answer. The definition is one impediment. Kudzu is widespread occupying five million acres in the eastern United States. Another major impediment is the large cost of a kudzu control program.

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Question. What is the estimated cost of eradicating Kudzu if the law was changed?

Answer. In practical terms, kudzu is well beyond the point of being eradicated totally from the United States. There is technology available to control kudzu and eliminate it from individual sites, however, an APHIS-directed program would have to be a massive, multi-year effort. If we became involved in a cooperative control effort with State agencies, Federal land management agencies, and private land owners, control costs would be a minimum of \$160 per acre, spread over three years. If we assume that 5 million acres are infested, the total cost of chemical control would be \$800 million. This estimate does not include costs associated with research, detection, delimiting, and appraisal surveys (before and after), monitoring, clean up treatments, and re-vegetation efforts.

QUESTIONS SUBMITTED BY SENATOR MCCONNELL

COMMERCIAL TRANSPORTATION OF EQUINE FOR SLAUGHTER

Question. During last years appropriation hearing I asked the Secretary for his cooperation and assistance in implementing Title IX—Miscellaneous, Subtitle A—Commercial Transportation of Equine for Slaughter. I was informed that a determination could be made, however, it would be difficult to enforce this regulation without additional funding to support inspection personnel and related costs. Please provide the Committee and myself the status of implementing the Commercial Transportation of Equine for Slaughter?

Answer. To date, the Commercial Transportation of Equine for Slaughter statute has not been implemented.

Question. Has the Department issued any guidelines/regulations? If not, when?

Answer. No guidelines or regulations have been issued. An interagency working group was formed to assess the feasibility of implementing this program and to determine program resource requirements. The group concluded that effective implementation of the program would require conducting preliminary research, producing an educational publication and video, and hiring a veterinary medical officer(s) and program assistants. It is not yet known when the Department will issue guidelines or regulations.

Question. Last year the Secretary said it would be difficult to enforce this regulation without additional funding, what can be done to enforce this provision without additional funds?

Answer. No enforcement activities can be conducted at the current funding level.

Question. If additional funds are needed did you request funds? If not, why?

Answer. Because of budget constraints, the Administration was not able to request additional funds for the commercial transportation of slaughter horses program.

Question. How much is needed to enforce this provision?

Answer. It is estimated that \$411,000 would be required to establish the Commercial Transport of Slaughter Horses program.

Question. Please provide a breakdown of how these funds would be spent?

Answer.

Commercial Transport of Slaughter Horses Program

<i>Cost category</i>	<i>Dollars (est.)</i>
Salaries and Benefits	\$245,000
Travel	31,000
Transportation of Things	17,000
Printing	8,000
Cooperative Agreements	34,000
Supplies and Materials	6,000
Equipment	70,000
Total	411,000

QUESTIONS SUBMITTED BY SENATOR BURNS

BRUCELLOSIS

Question. Quickly, I would like to state that I have been a strong proponent of the Animal and Plant Health Inspection Service. I have never had a problem coming

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into this country and proceeding through the protocols necessary to make sure that all the animals and plants in this country are protected. I would also like to commend you for the approach you are taking to make sure we have a clean and healthy bison herd in Yellowstone National Park.

I would like to start off by asking how many herds in America today are infected by Brucellosis? How many 10 years ago?

Answer. Of the estimated 1.2 million cattle herds in the United States, 26 are currently affected by brucellosis and under quarantine. Ten years ago, at the end of fiscal year 1987, there were 3,160 affected herds under quarantine.

Question. Does the reduction in funding adequately accept the risk as we continue to see it coming out of Yellowstone National Park?

Answer. The fiscal year 1998 President's Budget does include adequate funding for the brucellosis program, specifically for activities in the Greater Yellowstone Area (GYA). This funding will allow APHIS to continue to support research to develop alternative brucellosis vaccines for bison and elk and to study the transmission of brucellosis from wildlife to domestic livestock. In addition, funds will support a wildlife veterinarian in Montana to serve as a liaison among the involved government agencies.

APHIS is committed to working cooperatively with the involved government agencies to address the most critical issues. These include eliminating brucellosis in the GYA, providing additional suitable bison winter range outside the park, and coordinating these activities in such a way to encompass the interests of the stakeholders.

Question. Could you provide the committee with the brief on the current work being done on research for an effective vaccine for bison and also for elk as a treatment against Brucellosis?

Answer. To date, APHIS has committed more than \$3 million toward brucellosis research in the GYA. A new vaccine, RB51, has recently been approved for use in cattle. Researchers are also testing this vaccine on bison calves, male bison, pregnant bison, and elk to determine its safety and effectiveness. Specific examples of research on RB51 include a vaccination field study on bison yearlings in South Dakota, a vaccination safety and efficacy study on pregnant bison in Idaho, a vaccination safety study in male bison, vaccination safety field trials in bison calves, and a controlled study on the immune response of elk to the vaccine. Tests of the RB51 vaccine look promising. Before RB51 can be approved for use in bison and/or elk, the vaccine must pass additional safety and efficacy trials. This process may take up to 2 years.

Question. Mr. Medley, I appreciate your willingness to work with the state of Montana in protecting their Brucellosis free status, but in all reality what does your document mean to Montana and Wyoming when we have other states either that have with been imposing or threatening to impose sanctions on our states?

Answer. Most Federal requirements are relieved when States, such as Montana and Wyoming, attain Class Free status. Traditionally, State import requirements for brucellosis have paralleled the Federal interstate movement requirements. However, the States surrounding the GYA are in a unique situation. Their cattle are free of brucellosis, but a perception exists that their cattle may have been exposed to brucellosis infected bison from Yellowstone National Park. Several States have deemed it necessary to protect their cattle by imposing or threatening to impose additional import requirements, which are scientifically-based, on the surrounding States. Fortunately, most States believe that the class statuses of these States have not been compromised.

APHIS can minimize the concerns of the importing States by working with the National Park Service to properly handle the Yellowstone bison leaving the Park to prevent their exposure to the brucellosis free cattle in the States surrounding the Park. In addition, APHIS can work to minimize the imposition of State import requirements that interfere unnecessarily with interstate commerce. It is not unrealistic, however, to believe that some States may continue to impose testing requirements on cattle from around Yellowstone until brucellosis has been eradicated from the bison in the Park.

ANIMAL DAMAGE CONTROL

Question. Wolves have been introduced in Idaho, and Montana and are showing up in parts of Wyoming. With the increased wolf numbers, what impacts does the wolf presence in a given area have on the ADC program and it's ability to respond to other predation problems?

Answer. Gray wolves began naturally moving back into northwestern Montana from Canada in the mid-1980's. This naturally occurring population of wolves is increasing and now occupies northern Idaho as well as northwestern Montana, and

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consists of about 70 adults and yearlings and possibly 30 pups. To speed wolf recovery in the region, the U.S. Fish and Wildlife Service (FWS) captured 29 wolves in Canada in 1995 and 37 wolves in 1996. They released them into Yellowstone National Park and central Idaho. This group of wolves is considered a nonessential experimental population and it is increasing as well. Introduced wolves have successfully bred and are raising pups.

As evidenced by the increase in their numbers, both naturally occurring and reintroduced gray wolves can thrive in many areas of Idaho, Montana, and Wyoming. They sometimes frequent areas of human activity and some seem to select the same type of habitat that some people prefer, such as areas of interspersed forest and open areas typical of ranching communities in western Montana. Most of the wolves have not come into direct conflict with people, but some have killed livestock. An increase in these conflicts is expected as the wolf population increases.

ADC plays an important role in wolf recovery. This includes verification of wolf livestock predation, capturing depredating wolves, mediating conflicts between agencies and resource owners, and disseminating information to the livestock community and the general public. Wolf recovery and reintroduction in Idaho and Montana have caused restrictions on the use of traditional methods of control where wolves may exist. This results in more costly control methods such as aerial operations, to ensure ADC activities minimally impact wolves. Also, the presence of wolves creates additional workload, causing delays in ADC response time to requests for all predator control assistance in wolf recovery areas.

Question. Is the U.S. Fish and Wildlife Service contributing any research efforts on funding to address capturing methodologies that the USDA, APHIS, Animal Damage Control program could use that would minimize impacts that wolf recovery will have on other aspects of the ADC program?

Answer. APHIS does not receive funding from the FWS for research related to wildlife capturing methodology, nor is the Agency aware of other FWS involvement in such research.

Question. Plans to release Mexican wolves in New Mexico and Arizona next year are underway. Has the U.S. Fish and Wildlife Service given consideration to the impacts that the presence of wolves will have on the routine activities of the USDA, APHIS, Animal Damage Control program uses to reduce coyote damage to livestock? What ADC tools will be restricted? What is the increased cost to APHIS/ADC with a limitation on these tools? What the cumulative impacts to the livestock industry in terms of increase predation by predators other than wolves and increased management cost?

Answer. In the final ADC Environmental Impact Statement (EIS) for reintroduction of the Mexican Wolf within its historic range in the Southwestern United States, the FWS indicates that wolf reintroduction will primarily impact cattle resources in the area with potential losses to wolves ranging from 0 to 34 individual animals. FWS is uncertain but theorizes that populations of coyotes and mountain lions could also be displaced, which could result in temporary higher concentrations of these animals in some areas. The FWS will restrict the use of the M-44, neck snares, and foothold traps in the wolf recovery areas of Arizona and New Mexico. The final EIS also indicates that these restrictions will likely reduce ADC effectiveness in controlling other predators in the area unless ADC commits additional resources.

The FWS plans to issue a final rule for the proposed establishment of a non-essential experimental population of the Mexican Gray Wolf in Arizona and New Mexico before wolves are released in these areas. The final rule, which is expected to be published in the Federal Register about the first week in June 1997, will specify the circumstances under which control or management intervention of wolves can occur, and the methodologies which can be employed. Over the next 9 months, the FWS will develop detailed management plans and agreements to define its working relationship with cooperating agencies.

Under current management plans for wolf recovery in the Northern Rocky Mountain States, the use of traditional methods of control including M-44's, foothold traps, and snares would be restricted or forbidden in known wolf population areas.

Current management plan restrictions require more time consuming or more expensive control approaches such as aerial control, to ensure that ADC activities do not significantly impact wolf recovery efforts. Based on the impact of wolf management activities on ADC livestock protection efforts in Montana, APHIS estimates that increased costs currently amount to about \$85,000 per year. If similar programs were to be introduced in Arizona and New Mexico, initial impacts could be expected to be approximately the same in each State, with increases in proportion to increases in wolf populations.

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A study would be required to determine the impact of increased predation to the livestock industry. However, an increase in predation can be expected as workloads increase due to expanding wolf populations. Because of increased workload, ADC response time to requests for assistance, which involve traditional livestock protection activities, is increasingly delayed.

Restrictions on the use of traditional control tools are resulting in the use of more expensive control techniques such as aerial control. Also, a need for additional employees as wolf populations increase will most likely cause increased costs to both APHIS and cooperators.

Question. This fiscal year Congress appropriated \$100,000 to ADC for wolf damage control, and the U.S. Fish and Wildlife Service agreed to provide ADC an additional \$100,000 for this same purpose. How are these funds being spent, and are they adequate to respond to wolf damage complaints? Is this amount adequate for future problems as the wolf population grows?

Answer. Funds are used for verification of wolf livestock predation, capturing depredating wolves, mediating conflicts between agencies and resource owners, and disseminating information to the livestock community and the general public. The new interagency agreement between FWS and APHIS commits a total of \$200,000 per year toward efforts in dealing with wolf predation on livestock in Idaho, Montana, and Wyoming. APHIS currently estimates these efforts to cost approximately \$215,000 in fiscal year 1997.

In addition to a projected reprioritizing of approximately \$15,000 in fiscal year 1997 for wolf management efforts, APHIS is projecting the need to reprioritize approximately \$58,000 in fiscal year 1998, beyond the \$200,000 per year currently committed in the APHIS/FWS interagency agreement for work in Idaho, Montana, and Wyoming. With expected reintroductions of the Mexican wolf in the near future, APHIS may need to expand efforts to include the States of New Mexico and Arizona. Total efforts including the additional States could cost \$730,000 in fiscal year 1999, and \$1,162,000 in fiscal year 2000.

KARNAL BUNT

Question. Could you provide this committee with the current status of Karnal Bunt in the United States?

Answer. Currently, Karnal Bunt is confined to small areas in Arizona and California. We are now regulating four counties in Arizona and parts of two counties in California due to the presence of the disease. Our National Survey has demonstrated that the disease is apparently not present in detectable levels in other production areas. As a precautionary measure, though, we are also regulating small areas in New Mexico and Texas because infected seed was planted in these areas. Bunted kernels have never been collected from fields in these two States. These regulations are necessary to control the movement of infected grain and seed. For several years before the detection of Karnal Bunt in Arizona in March 1996, we had been conducting Karnal Bunt surveys as part of our Cooperative Agricultural Pest Survey program. The data gathered through these surveys has enabled us to continue certifying wheat for export even after the 1996 detection. To date through our National Survey, we have tested over 15,000 grain samples representing all wheat-producing areas in the United States. Based on these tests, we have not been able to confirm the presence of Karnal Bunt in any areas of the U.S. other than those where we knew the disease to be present.

In addition, we will co-host an international symposium in August with Mexico and Canada through the auspices of the North American Plant Protection Organization to gain consensus on Karnal Bunt's disease threat status. Our goal is to provide all countries with the opportunity to review all available data and create rational and objective standards for the international movement of grains affected by various smut diseases. Also, we will seek to determine if there is international support for minimizing regulatory actions on Karnal Bunt.

Question. How does this reflect upon our ability to export our product overseas to markets we have had long standing trade arrangements with?

Answer. Our wheat exports have not been significantly affected because Karnal Bunt has not reached the major wheat-producing areas of the United States. We are still able to certify most wheat for export by demonstrating that it is not coming from areas where Karnal Bunt is known to be present or areas at risk because of Karnal Bunt. Also, we can certify that over 90 percent of U.S. wheat originates in areas where Karnal Bunt is not known to be present; we have seen a relatively normal movement of wheat exports since the beginning of our program. The export of speciality wheat from the regulated areas in Arizona and California has been affected, but this is an extremely small portion of total U.S. exports. Because virtually

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all trade partners will accept wheat from areas where Karnal Bunt is not known to be present, the presence of the disease in regulated areas of the southwest will not materially affect wheat exports in the future.

Question. On the research end of the problem, could you provide me with the current status of providing a certificate to Montana State University, College of Agriculture, to allow them to hold in quarantine a portion of wheat infected with KB to do research on, under an agreement between Montana State university and the Agricultural Research Service?

Answer. In April, we provided a permit to Montana State University (MSU) to conduct specified laboratory research on Karnal Bunt under certain safeguards. These safeguards were agreed upon by MSU scientists, the Montana State Department of Agriculture, the Montana State Plant Health Director, and the Agricultural Research Service. The permit does not allow MSU to hold in quarantine any wheat infected with Karnal Bunt since they do not have a certified quarantine facility.

Question. Along this same line of thought, Montana State has requested on several occasions the assistance of a quarantine facility expert to review the plans and blueprints of a research lab in Bozeman, Montana. However, they continue to be bounced around in the process. Many times they are told the plans look good, but no real assessment can be made until the construction is complete. This sounds like sending good money after bad. Could you look into this situation and see what you can do to assist Montana State university in completion of the plans for the development of a research lab?

Answer. On February 15, the Davidson Kuhr Architects Company submitted drawings for a proposed quarantine facility at MSU to our National Plant Germplasm Quarantine Center in Beltsville, Maryland. We requested a written specification proposal from MSU to outline how safeguards that are included in our draft guidelines would be incorporated into their plans. MSU advised us that they would contact the architect to provide this additional documentation. On May 14, we contacted the architect company and confirmed that MSU had asked for a proposal for our review and evaluation. The architect then informed us that he will submit the proposal by early June. When we receive the proposal, it will take approximately two weeks for review. Once the architect corrects any deficiencies we may find, we will approve the proposal and construction may begin. We will conduct another evaluation once the facility has been completed and will continue providing the architect with any assistance he may need. This facility is needed to properly contain the Karnal Bunt organism.

QUESTIONS SUBMITTED BY SENATOR BUMPERS

BOLL WEEVIL

Question. Your budget for fiscal year 1998 includes a decrease in spending for boll weevil eradication. You state fewer funds are needed due to the fact that the weevil has been eradicated in many areas. In those areas where the weevil has been eradicated, how do profit margins for cotton farmers compare to farmers in states where the weevil is still present? Rather than reducing funds, did you consider maintaining level funding and concentrating more on the remaining areas of infestation.

Answer. The current profit margin for cotton farmers in weevil-free areas, such as Georgia, is roughly \$200 per acre. In contrast, the current profit margin for cotton farmers in moderately infested areas of the mid-South, including southern Arkansas, is roughly only \$100 per acre. This disparity in profit margins is primarily due to reduced costs of pest control and increased yields for farmers in weevil-free areas.

In the earlier stages of the eradication program, growers assumed a higher risk of program failure in participating. Therefore, APHIS had to contribute significant financial resources to mitigate that risk. But as the number of eradicated acres has increased, the growers' risk of participating has decreased as we have effectively demonstrated the program's benefits. We consider it reasonable, as we try to reduce Federal expenditures to help balance the budget, to ask growers to pay a larger share of program costs.

Question. You further state that APHIS will pursue policies in which beneficiaries should contribute more to overall program funding through user fees or cooperative contributions. Last year, this subcommittee created a loan program through the Farm Service Agency to enable cotton farmers to engage in boll weevil eradication efforts to supplement direct funding from APHIS. In this way, farmers were putting more of their own money up front. Still, for some reason, the budget request for fiscal year 1998 would terminate that loan program. Don't you think that loan pro-

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gram was consistent with your aim of increased farmer contributions? Did you coordinate your boll weevil program with FSA?

Answer. Under the grant program, producers were not responsible for repayment. But under the loan program, producers now bear a larger share of the responsibility and costs and are responsible for repaying the loan. We believe that the loan program is a great benefit to the boll weevil eradication effort. Unfortunately, the regulations to operate the program were not in place prior to FSA's fiscal year 1998 budget request. Therefore, the request did not include any provision for the program.

We helped them prepare the environmental documentation for the loan program and we have acted as a liaison between FSA and cotton growers foundations. These regulations were published in the Federal Register on May 16, 1997

ANIMAL DAMAGE CONTROL

Question. The budget reduces the funding for ADC and goes further to require that no more than 50 percent of federal funds be used for ADC programs in any state. This could be problematic for states, such as Arkansas, where ADC programs have been used to control migratory species, such as blackbirds, rather than indigenous species, such as beaver, coyote, or other "localized" problem animals. It appears that Arkansas' ADC office will be closed under your proposal simply because it has concentrated its resources on federal migratory pest species instead of setting up a government subsidized pest control agency to compete with state agencies and private sector companies. Please explain your understanding of the separation of clear federal duties in the area of wildlife management and those duties that are the clear responsibility of State Wildlife Agencies and include a statement on migratory versus non-migratory species problems. Do you consider cooperatively financed ADC operations to be in direct competition with the private wildlife control industry? Does APHIS have any requirement or mechanism for Regional, Administrative, or Washington office to obtain cooperative funding?

Answer. APHIS has a responsibility to provide leadership and assistance to the States, local governments, and private individuals in managing damage caused by the Nation's wildlife. The Animal Damage Control Act, as amended, authorizes the Secretary of Agriculture to conduct activities and to enter into agreements with States, local jurisdictions, individuals, and public and private agencies, organizations, and institutions in the control of nuisance mammals and birds and those mammal and bird species that are reservoirs for zoonotic disease. The U. S. Fish and Wildlife Service is the regulatory Federal Agency primarily responsible for the conservation of migratory birds, threatened and endangered species, certain marine mammals, and sport fishes. Specific responsibilities of State wildlife agencies vary, but generally include regulatory authority to conserve and protect migratory and non-migratory wildlife, and species of special concern.

APHIS is specifically authorized to provide wildlife damage management assistance to these and other governmental agencies as well as private organizations and individuals. Such wildlife damage assistance is planned and implemented in coordination with the FWS and State wildlife management agencies to ensure regulatory compliance and environmental soundness. APHIS also coordinates wildlife damage management program efforts and negotiates related cooperative agreements in multiple states to enable more effective, cooperative, and cohesive programs.

The ADC program works closely with the pest control industry to ensure that competition with private enterprise does not occur. Where private resources exist, ADC personnel routinely refer people seeking assistance to local pest control or nuisance wildlife operators. APHIS personnel provide technical assistance, training, and instructional sessions in the use of various methods, both lethal and nonlethal to members of the pest control industry. APHIS works closely with industry in maintaining pesticide registrations, data gathering, addressing research needs, and also in providing assistance to industry members in obtaining the required migratory bird depredation permits. Additionally, APHIS has developed a training and certification program allowing pest control operators and others access to the avicide Compound DRC-1339 and the tranquilizer Alpha-Chloralose. Formerly, these chemicals were authorized for APHIS use only, but now may be used by the pest control operators when under the supervision of APHIS personnel.

APHIS has mechanisms in place to establish cooperatively funded agreements at the regional, administrative, or Washington office levels for ADC. Cooperative relationships have been established with various organizations and governmental agencies at regional and national levels, to identify and attain additional funding resources. This includes the aviation industry, the Federal Aviation Administration and the Department of Defense. Nevertheless, most ADC cooperative funding agree-

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ments are negotiated at the State level to provide effective and responsive service to cooperators. In regard to requirements for cooperative funding, ADC has maintained a policy for the past several years in which all new cooperative agreements must meet a minimum 50/50 percent cost ratio.

IMPORTED FIRE ANT

The University of Arkansas at Monticello, through APHIS, has been working with land owners in Arkansas and scientists at the University of Florida on methods to control the fire ant. They have been able to document real costs of the fire ant in terms of economic losses and I understand the techniques they have developed are of keen interest to local land owners and that their efforts in conjunction with the University of Florida may hold real promise through possible introductions of natural predator species they found in Argentina.

Question. Could you comment on your perception of the problems posed by the fire ant and the work conducted at and through the University of Arkansas at Monticello?

Answer. The imported fire ant (IFA) has spread through the most of its range in the Southeast and Central United States. It is currently established in the following regulated States: Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, Oklahoma, Puerto Rico, South Carolina, Tennessee, and Texas. The threat posed by the IFA is especially significant since this pest lacks natural enemies and there are no effective, efficient, and environmentally acceptable control agents available for large scale application on agricultural land. Until the Environmental Protection Agency registers an acceptable control product, we cannot conduct any area-wide control activities. For APHIS to cooperate in control treatments, we would need to conduct a new environmental impact statement, which would require \$1 to \$1.5 million and 1.5 to 2 years to complete. We have completed a preliminary environmental assessment, which demonstrated a strong case for no action with current technology. Still, we are continuing to assist the States in preventing the spread of IFA to the Western United States. We will also help States maintain domestic markets for nursery products. In addition, we will continue to evaluate the efficacy of regulatory treatments for preventing further artificial spread of the IFA.

For the last several years, we have contributed \$200,000 per year to the University of Arkansas at Monticello through a cooperative agreement to conduct research on IFA's. The three areas funded by this agreement are a self-supporting community abatement program, an economic impact assessment, and an ARS biological control project. Of the \$200,000 provided to the University, \$76,000 is devoted to the abatement program, \$100,000 is devoted to the economic impact assessment; and \$24,000 is devoted to the biological control project.

For the abatement program, the University conducted several demonstrations of control programs in public areas to help area residents better manage fire ants using existing control methods. This project has developed plans that other communities can use to initiate their own abatement programs. Also, the project produced and distributed several videos and manuscripts. These public information tools are designed to describe the theory and practice of using community-wide programs to minimize control expenses and reinfestation rates and to inform individual landowners about temporary IFA control methods.

The economic assessment analyzed the effect of fire ants on agriculture and the general public. It concluded that IFA's cause \$1.1 billion annually in agricultural damage, harm to public health and welfare, and equipment problems. It also indicated that economic impacts are especially severe where human activity is frequent. In addition, it showed that pesticides alone will not provide a long-term solution to the problem because of IFA's rapid recolonization and colony growth rates. Therefore, the focus for IFA control is turning to non-pesticide strategies, such as biological controls.

Currently, the University is contributing to an ARS biological control project to find effective control agents for IFA in South America. When imported into the United States, these enemies could reduce populations to manageable levels similar to those found in most of South America. So far, this project has identified three different organisms for potential impact on IFA in the United States, including a parasitic fly that attacks only IFA, a protozoa disease that weakens the ants and eventually kills the colonies, and another parasitic ant that attaches itself to the IFA queen and causes a debilitating drain on the colony. When sufficient testing is completed, APHIS' role would be to mass produce and distribute the biological control agents. None of the identified organisms by themselves will be enough to eradicate IFA from the United States because the pest is so widespread, but we hope that the use of one or a combination of these methods will enable native ants to

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compete effectively with the IFA and manage its population, as well as reduce its economic and public health impact on the U.S. public.

QUESTIONS SUBMITTED BY SENATOR KOHL

ANIMAL DAMAGE CONTROL

Question. I understand that USDA is seeking a 50/50 cost-share funding arrangement for the Animal Damage Control cooperative programs for fiscal year 1998. Do you have any accounting to show how much of the field operations cooperators have funded in the past few years, by state and region?

Answer. The following table contains the amount of federal appropriated funds and cooperator contributed funds allocated by State for fiscal year 1994, fiscal year 1995 and fiscal year 1996. These funds are used for efforts such as resolution of wildlife conflicts at airports, the rabies control project in Texas and other human health and safety issues, as well as for the protection of endangered species and public and private property.

[The information follows:]

State	Fiscal year 1996		Fiscal year 1995		Fiscal year 1994	
	Approp.	Coop.	Approp.	Coop.	Approp.	Coop.
AL	\$159,900	\$31,963	\$163,000	\$57,465	\$108,000	\$82,454
AK	45,000	680,459	50,000	217,986	42,257	312,996
AZ	448,799	265,791	434,384	267,774	437,239	262,517
AR	258,890	.....	259,690	.....	249,690	.....
CA	1,414,915	2,264,991	1,526,097	2,290,753	1,517,736	2,047,100
CO	790,480	240,854	765,524	167,633	770,090	256,545
CT	9,370	.....	14,992	.....	14,720	.....
DE	10,580	.....	10,580	.....	10,000	.....
DC	4,761	.....	10,580	.....	10,000	.....
FL	151,950	78,743	155,200	44,150	93,500	32,877
GA	103,800	109,477	103,800	103,398	96,000	109,665
HI	100,000	670,262	95,000	600,732	84,050	655,712
ID	936,144	411,400	905,819	406,106	906,380	359,101
IL	117,050	326,137	117,050	320,447	117,050	103,687
IN	96,700	21,513	104,387	10,363	91,000	11,205
IA	68,960	4,361	54,235	2,197	51,884	543
KS	75,000	33,804	75,000	1,126	71,327	.....
KY	81,600	126,212	118,663	199,752	80,000	82,155
LA	361,600	221,520	362,400	137,820	352,400	99,758
ME	135,700	45,320	135,700	96,980	133,500	90,238
MD	90,459	71,885	84,640	40,446	80,000	41,370
MA	75,897	36,450	73,086	16,000	71,760	29,558
MI	97,800	28,855	105,487	8,876	96,000	8,424
MN	242,500	96	246,500	30	242,500	2,579
MS	567,700	849,499	527,800	654,052	472,800	364,651
MO	103,440	54,063	133,539	41,103	133,416	19,783
MT	973,500	547,194	987,759	538,474	993,981	538,512
NE	393,874	332,556	372,174	245,502	372,351	223,300
NV	814,872	619,852	791,172	586,071	796,987	633,775
NH	175,306	68,549	186,900	62,135	172,050	57,257
NJ	109,340	208,182	105,784	428,990	98,600	240,904
NM	1,242,585	1,098,776	1,175,550	1,218,389	1,184,525	919,100
NY	119,634	115,898	119,634	28,823	131,000	31,621
NC	185,850	575,420	135,850	305,579	126,500	209,437
ND	772,052	331,948	748,721	387,746	752,031	311,606
OH	148,900	70,000	148,900	47,037	146,000	44,859
OK	789,852	927,322	766,152	800,186	751,355	716,042
OR	974,440	724,621	943,788	737,608	951,323	713,003
PA	79,178	.....	83,116	.....	71,400	.....
RI	8,433	.....	5,622	.....	5,520	.....
SC	163,611	269,778	113,611	245,648	104,000	210,000
SD	300,000	786,136	300,000	830,839	300,000	827,248
TN	244,800	280,701	223,111	336,162	240,000	378,232
TX	2,290,752	5,564,171	2,287,820	5,205,424	2,312,245	5,210,498
UT	996,992	840,175	962,067	764,823	979,841	707,445

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State	Fiscal year 1996		Fiscal year 1995		Fiscal year 1994	
	Approp.	Coop.	Approp.	Coop.	Approp.	Coop.
VT	61,594	39,710	50,000	30,566	60,450	40,718
VA	168,400	179,034	222,210	124,386	161,500	97,245
WA/Guam	588,637	2,230,392	566,183	2,064,108	520,233	1,321,090
WV	89,700	120,582	97,387	93,156	88,000	90,928
WI	525,500	951,596	525,500	904,144	518,000	855,865
WY	1,006,781	471,136	971,317	427,924	978,576	584,461
Total	19,773,578	23,927,384	19,523,481	22,098,909	19,149,767	19,936,064

Question. It is my understanding that in some states, such as Wisconsin, the operators have actually funded more than 50 percent of the ADC field operation costs. Does your budget request for ADC reflect the increased federal funding that will be needed in states like Wisconsin, if USDA-ADC were to commit to funding a full 50 percent of the ADC field operation costs?

Answer. The fiscal year 1998 budget request proposes that APHIS provide no more than 50 percent of the total cooperative animal damage control operations costs in each State. As Wisconsin is one of the States in which cooperative funding exceeds federal contributions, APHIS would make no adjustment to the amount of federal contributions in this State.

QUESTIONS SUBMITTED BY SENATOR LEAHY

VERMONT INSPECTION STATIONS

In 1996 APHIS indicated its intention to close the Animal Inspection Station in Derby Line, one of two animal inspection stations in Vermont. This closure would have disrupted established routes of livestock trade with Canada for a minimal savings to the agency since the Derby Line office does not have its own full time staff. To compound the problem, the other inspection station in Highgate, where APHIS planned to consolidate its operation, is in the midst of a major upgrade resulting in significant construction activity at the site. The fiscal year 1997 Agriculture Appropriations bill included language requiring APHIS to continue operation of the Derby Line inspection station.

Question. What is the current operating status of the Derby Line animal inspection facility? What are the Department's most recent plans for the future of the Derby Line and Highgate stations? (Please include budget and time-line information.)

Answer. At this time, APHIS continues to operate the Derby Line animal inspection facility for livestock inspection services. The Committee directed that the Derby June Facility remain open until work at the Highgate is complete. We intend to comply with the report language.

We plan to close the Derby Line livestock inspection facility on September 1, 1997. The new livestock inspection facility, currently under construction at Highgate should be completed by July 1997. On September 1, 1997, complete and full time livestock inspection services will be offered at Highgate. Operating one full-time livestock inspection facility at Highgate will provide users with dependable access to livestock inspection services during normal business hours. The Department will save about \$35,000 annually through decreased rental and operating costs.

ASIAN LONG-HORNED BEETLE

The recently discovered Asian long-horned beetle infestations in Brooklyn and Amityville, New York have created a great deal of concern in Vermont and other Northeastern states. Some reports indicate that other areas may have been exposed to the beetle through shipment of logs to other parts of New York and Montreal. Given that the beetle has no natural enemies and attacks mostly Norway and sugar maples, I am greatly concerned that the spread of this insect into forested areas of New York, Vermont and Massachusetts could threaten the important maple sugar and fall foliage industries of the Northeast. The sugar maple is one of the most valuable trees in New England. The sap produces maple syrup; the wood is highly prized for furniture, paneling and wood flooring; and the leaves provide an important attraction for tourists in the autumn. It is my understanding that the Animal and Plant Health Inspection Service (APHIS) has been working with the New York Department of Agriculture and Markets to develop and implement an eradication plan.

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Question. What activities has APHIS undertaken to eliminate the beetle and what activities are planned under the fiscal year 1998 budget?

Answer. In October 1996, we released \$694,000 from our contingency fund to conduct an Asian long-horned beetle (ALB) eradication program. We are working with the USDA Forest Service and officials of State, county, and city agencies in New York State (NYS). The program consists primarily of tree removal, but it also includes detection and delimiting surveys and intensified extension/education efforts in NYS. Tree removal is nearing completion and the program will have removed all known infected trees by April 1, 1997. This will eliminate the next generation of ALB. Our role in tree removal involves oversight to assure that the trees are properly handled, processed, and disposed. If we discover additional infestations, eradication activities will continue beyond April 1. Surveys will be conducted annually for two years beginning in May 1997 in Long Island and Manhattan. Also, we will conduct intensive surveys annually for five years within the regulated areas (the Greenpoint area in Brooklyn and Amityville, Long Island). No ALB activities are included in our fiscal year 1998 budget since this problem surfaced after we submitted our budget. However, we must consider using miscellaneous plant pest funds or using contingency funds to continue the program in fiscal year 1998.

Question. What changes may be necessary in inspection practices to insure that another Asian long-horned beetle infestation does not occur?

Answer. To identify risks and prevent future introductions of ALB, we have published and distributed Pest Alerts and other bulletins to our inspectors. For example, on October 11, 1996 and again on March 14, 1997, we distributed a pest alert on ALB and its establishment in New York. This alert informed our inspectors about actions we can take and are taking at ports-of-entry to prevent additional introductions of the ALB and related pests. In addition, we recently distributed a Port Alert to our inspectors to inform them of potential pathways for the ALB and its relatives to help prevent further introductions like that on Long Island, New York. Until recently, our inspectors did not identify longhorned beetle larvae from Asia to genus Anoplophora. They now are able to recognize these larvae as being ALB larvae and can more accurately track cargo pathways that may introduce ALB. Also through these alerts, we continually advise our inspectors of policy changes regarding criteria for inspections and interceptions and provide information on the APHIS World Wide Web home page that would help them prevent future introductions. The log and lumber regulations that took effect in August 1995 and post-date the introduction of the Asian long-horned beetle (ALB) prohibit the importation of untreated fresh (green) lumber pallets. Untreated lumber is more likely to harbor the ALB than treated lumber or older, used lumber. In the meantime, we have intensified our efforts to monitor cargo from the Far East, the ALB's region of origin. The combination of these mitigation measures should provide adequate assurance that another ALB infestation does not occur.

Question. What steps has APHIS taken to identify potential exposure risks from other non-native pests that could be transported into eastern ports, and what steps is the agency taking to prevent that from happening?

Answer. Besides the ALB Pest Alerts and our enforcement of the log and lumber regulations, we began redefining several aspects of our entire plant pest and disease exclusion program in fiscal year 1996. This new focus has enabled us to concentrate on risk evaluation, new monitoring techniques, and continuous reviews of our practices. For example, we greatly expanded our commodity smuggling interdiction program in fiscal year 1996. This program, which is designed to prevent the smuggling of prohibited Oriental agricultural products, is now being conducted nationwide. Through our AQI results monitoring program, which we have initiated at almost all ports of entry nationwide, we evaluate the effectiveness of our inspections regarding plant pest and disease interceptions. Our statistical sampling and analysis enables us to predict how effective we are at preventing the introduction of harmful agricultural plant pests and diseases. In addition, we are continuing to enhance technology through the development of enhanced x-ray systems, photographic imaging, and the dissemination of actionable interceptions and improved automation capability. Also, we have instituted uniform staffing guidelines at all ports-of-entry nationwide and have evaluated assigned shift coverages to ensure that our inspectors are always available during peak activity, when there is the greatest risk of an introduction.

ANIMAL DAMAGE CONTROL

The President's fiscal year 1998 budget request for the Animal Damage Control program represents a \$3.2 million decrease in funding. The Department proposes to provide no more than 50 percent of the total program support for each State. In Ver-

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mont, the Rabies Hotline program has consistently provided an important service to Vermont farmers at relatively small cost.

Question. How will this program be affected by this funding decrease to the Animal Damage Control program? What other programs in Vermont may be affected by this new policy?

Answer. As Vermont currently is one of the States in which Federal contributions exceed those of cooperators Federal funding for animal damage control efforts in Vermont could be reduced as a result of the budget request. However, the 50 percent requirement applies to total State funds, not to individual projects, which allows states some flexibility. The Vermont office would be maintained to provide continued advice on task forces for rabies management efforts, but the toll-free rabies hotline would be discontinued unless cooperator funding were increased to support it.

QUESTION SUBMITTED BY SENATOR BOXER

HASS AVOCADOS

Question. In your announcement regarding the publication of the final rule allowing the importation of fresh Hass avocados into the Northeastern United States, you stressed that it is important to understand that the rule provides only an opportunity for Michoacan producers to qualify to export their product.

It is my understanding that no imports will be authorized until APHIS-supervised surveys prove that each orchard meets the pest status requirements specified in the rule before being certified for export.

In order to address my long standing concerns about the phytosanitary risks of importing Mexican avocados, I make the following requests: (1) Before Mexican orchards are certified for export, you provide representatives of the California Avocado Commission full access to all pest survey data; (2) You provide California avocado growers with an opportunity to review and comment on the protocol that is being prepared by APHIS to implement the rule; (3) APHIS provide the Committee with a monthly status report on the implementation of the rule, including an assessment of the pest survey findings, and the orchard certification process.

Answer. The pest survey data that ensures freedom of pests of certified orchards and municipalities can be made available to anyone, including the California Avocado Commission, prior to the shipping season. The work plan is the protocol that will be used to implement the rule. The work plan includes each party's responsibilities. Interested parties will be provided an opportunity to comment on the proposed protocol that is being prepared to implement the rule through meetings being planned for early spring with the United States North American Plant Protection Organization Industry Advisory Group. We will be glad to work with your office to establish a reasonable way of providing information on survey findings.

GRAIN INSPECTION, PACKERS AND STOCKYARDS ADMINISTRATION

QUESTIONS SUBMITTED BY SENATOR COCHRAN

MARKET COMPETITION/CONCENTRATION

Question. What activities are being funded with the \$400,000 provided for fiscal year 1997 to carry out the recommendations of the Agricultural Concentration Committee?

Answer. Two specific projects were added to our fiscal year 1997 operating plans as a result of the additional \$400,000 received to carry out recommendations of the Agricultural Concentration Committee:

—An investigation of the lamb slaughter industry, which will include an extensive examination of slaughter lamb procurement practices, with an emphasis on evaluating competition and contracting arrangements.

—Followup analysis on the effects of captive supplies. Specifically, additional economic and statistical analyses will be conducted on the effects of forward contracting, packer feeding, and marketing agreement/formula pricing arrangements using data from the Kansas 1995 and the current Texas Feeder Cattle Procurement investigations.

Question. Out of the additional \$10 million released by the Secretary from the Fund for Rural America for research, extension, and education to counter concentration, food safety, nutrition, and gleaning, what amount will be allocated to counter concentration and what specific activities will be funded?

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Answer. Grain Inspection, Packers and Stockyards Administration (GIPSA) has submitted three research projects for consideration, dealing with certain areas such as: Economic Analysis of Poultry Integration; Vertical Coordination in Hog Production and Marketing; and Line-of-Business Reporting.

Question. Increased funding is requested for fiscal year 1998 to carry out the recommendations of the Advisory Committee on Concentration—\$500,000 for the Agricultural Marketing Service (AMS) to expand its reporting of livestock and poultry markets; and \$2.3 million for the Grain Inspection, Packers and Stockyards Administration (GIPSA) to address packer competition and industry structure and poultry compliance. Please summarize the need for these additional funds and what activities will be carried out.

Answer. The additional funds requested for fiscal year 1998 are needed for GIPSA to more aggressively pursue anticompetitive practices related to industry concentration. We have increased the frequency of anticompetitive investigations during the past two years. But this has come at the direct expense of programs designed to protect individual producers from unfair practices and provide financial protection. The additional funds will be used to recruit and integrate more economic, statistical, and legal expertise into investigative units that will conduct investigations involving anticompetitive practices, but not at the expense of our other vital enforcement responsibilities. In fiscal year 1998 we will conduct major anticompetitive practice investigations and detailed analyses in the slaughter steer and heifer, slaughter hog and slaughter cow industries and develop detailed evidence where incidences of anticompetitive practices are disclosed. Additional personnel with economic, statistical, and legal expertise will be critical to completing this work.

The additional funds requested for poultry compliance are necessary if the Agency is to initiate and perform more in-depth compliance investigations, rather than respond to complaints as they are received, as is the case today. These additional funds would allow the Agency to increase the number and expand the scope of compliance investigations, while at the same time continue investigating the increasing number of complaints being received from poultry growers.

Note: The Agricultural Marketing Service (AMS) response is shown under AMS.

Question. Please provide for the record, by fiscal year, the funds provided for fiscal year 1997 and proposed for fiscal year 1998 to carry out each of the recommendations of the Committee on Concentration and/or to address agricultural market concentration or livestock pricing. What additional funding will be required in future fiscal years to carry out the Committee's recommendations?

Answer. The Committee on Concentration proposed 55 recommendations. GIPSA's additional funding request focuses on four specific recommendations as follows:

	Fiscal year—	
	1997	1998
1. Antitrust enforcement of current regulations under the Packers and Stockyards (P&S) Act should be stepped up	\$100,000	\$1,000,000
2. Section 202 of the P&S Act, which deals with unfair trade practices, should be enforced to the letter of the law .....	.....	1,000,000
3. Congress should appropriate sufficient resources to allow aggressive pursuit of violations of the P&S Act and address problems in their incipency .....	.....	300,000
4. GIPSA should investigate lamb supply contracts for their impact on markets and market access for participants without a supply contract	300,000	.....
Total	400,000	2,300,000

DEALER TRUST

Question. The Administration again proposes legislation to amend the Packers and Stockyards Act to provide for a statutory "dealer trust." The explanatory notes indicate that this legislative proposal, if adopted, would provide one-time start-up costs of \$3 million to convert to license fee status. Would this be a mandatory direct funding requirement or an increased appropriations requirement, and how does the Administration propose to offset this additional one-time cost?

Answer. If the Packers and Stockyards Act is amended to provide for a statutory "dealer trust" no start-up funding is requested by the Agency, since such a "trust" would only be triggered when a dealer failed to pay for livestock purchases.

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The explanatory notes referring to the \$3 million one-time start-up cost refer to the proposed license fee legislation rather than the dealer trust. There will be start-up costs associated with implementing the proposed license fees. The principal costs will be the funds needed to maintain ongoing operations during a transition period that will be required to promulgate the necessary implementing regulations and begin collecting the license fees. It would also fund the leave liability accumulated under the appropriated program. Without appropriated funding, these costs would become an immediate liability to the users. This would be a one-time increase in appropriations.

QUESTIONS SUBMITTED BY SENATOR BURNS

LIVESTOCK MARKETING

Question. Jim, I would like to thank you for taking time out of your busy schedule several times during the past year to come out to Montana and discuss what it is your agency is doing to protect the individual livestock producer in today's market. I know you have made an impact and have developed some good friendships that will go a long way in developing confidence in GIPSA and the work you are doing.

Mr. Baker, talking real numbers and real dollars could you please explain what it is that you need to do to make sure that there is confidence by the producers in the next round of marketing in the livestock market?

Answer. GIPSA has requested an increase of \$1,595,000 for packer competition and industry structure issues for fiscal year 1998. The additional funds are needed for GIPSA to more aggressively pursue anticompetitive practices related to industry concentration. We have increased the frequency of anticompetitive investigations during the past two years. But this has come at the direct expense of programs designed to protect individual producers from unfair practices and provide financial protection. The additional funds will be used to recruit and integrate more economic, statistical, and legal expertise into investigative units that will conduct investigations involving anticompetitive practices. In fiscal year 1998 we will conduct major investigations of anticompetitive practices and detailed analyses in the slaughter steer and heifer, slaughter hog and slaughter cow industries and develop detailed evidence where incidences of anticompetitive practices are disclosed. Additional personnel with economic, statistical, and legal expertise will be critical to completing this work.

Question. Could you provide the committee with a brief overview of the actions that have been completed in the past year to make sure that the packers are not taking advantage of the marketplace on livestock? What is it that this committee and Congress can do to assist you in the completion of this task?

Answer. During fiscal year 1996, GIPSA concentrated resources on providing financial protection and promoting fair business practices and a competitive marketing environment for livestock, meat, and poultry. The Agency conducted over 2,000 investigations, disclosing over 800 violations of the P&S Act. Formal actions were requested in 84 cases and 62 administrative or justice complaints were issued in order to bring firms into compliance with the P&S Act. Administrative decisions and orders were issued in 49 cases during fiscal year 1996; however, most violations were corrected on a voluntary basis with several resulting in livestock and poultry producers receiving additional funds for the sale of their product. In addition, four major investigations are currently underway dealing with cattle procurement in the Texas Panhandle; slaughter hog procurement in the central United States; poultry settlements in several states; and lamb procurement. Providing the additional funds that we need is the best action that the committee and Congress can do to assist us.

The Packers and Stockyards Programs budget for fiscal year 1998 proposes \$14.8 million, which includes increases of \$225,000 to allow GIPSA to establish electronic filing procedures for reports; \$1,595,000 for activities in the packer competition and industry structure areas; and \$750,000 for poultry compliance activities. These funds are essential for the Agency to meet its responsibility of fostering fair and open competition, and guard against deceptive and fraudulent practices that affect the livestock, meat, and poultry industries.

CANADIAN GRAIN

Question. Mr. Baker, we are beginning to hear rumblings in northern Montana border towns about the amount of feed grain that is being imported into Montana grain bins that are not of a quality that is equal to that which is being marketed by Montana producers. This same wheat then is being mixed and sold as Montana

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quality grain, and yet carries a large amount of substandard Canadian grain in that same load. Would you like to comment on this and if you are not prepared would you please take some time to look into this and find out what the situation is and report back to me and the committee?

Answer. Under the current NAFTA agreement and the U.S. Grain Standards Act, grain is allowed to move freely between Canada and the U.S. with official inspection occurring only at the buyer/seller's request. Canadian grain entering a U.S. grain elevator is not required to be identified or binned separately from U.S. grain. Further, the U.S. Grain Standards Act prohibits the blending of dockage and foreign material to grain but does not prohibit the blending of different qualities of grain. Consequently, any grain shipped from Montana elevators is graded based on its kind, class, quality, and condition as it relates to the official grain standards. The origin of the grain is not relevant to the inspection process when assessing quality.

SUBCOMMITTEE RECESS

Senator COCHRAN. This concludes today's hearing. Our next hearing will be on Tuesday, March 11, in this room, 124, of the Dirksen Senate Office Building at 10 a.m. We will hear at that time from Department witnesses on the requests for food and nutrition programs. Until then, the committee stands in recess.

[Whereupon, at 11:52 a.m., Tuesday, March 4, the subcommittee was recessed, to reconvene at 10:05 a.m., Tuesday, March 11.]

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AGRICULTURE, RURAL DEVELOPMENT, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1998

TUESDAY, MARCH 11, 1997

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:05 a.m., in room SD-124, Dirksen Senate Office Building, Hon. Thad Cochran (chairman) presiding.
Present: Senators Cochran, Bumpers, and Leahy

DEPARTMENT OF AGRICULTURE

**STATEMENT OF MARY ANN KEEFFE, ACTING UNDER SECRETARY,
FOOD, NUTRITION, AND CONSUMER SERVICES**

ACCOMPANIED BY:

**DENNIS KAPLAN, DEPUTY DIRECTOR, OFFICE OF BUDGET AND
PROGRAM ANALYSIS, DEPARTMENT OF AGRICULTURE**
**YVETTE JACKSON, DEPUTY ADMINISTRATOR, FOOD STAMP PRO-
GRAM**

FOOD AND CONSUMER SERVICE

STATEMENT OF WILLIAM E. LUDWIG, ADMINISTRATOR

ACCOMPANIED BY GEORGE A. BRALEY, ASSOCIATE ADMINISTRATOR

CENTER FOR NUTRITION POLICY AND PROMOTION

STATEMENT OF EILEEN KENNEDY, EXECUTIVE DIRECTOR

OPENING REMARKS

Senator COCHRAN. The meeting of the Agriculture Appropriations Subcommittee will please come to order.

Today we are continuing our review of the President's budget request for Agriculture, Rural Development, and Related Agencies. This morning we will specifically review the request for programs and activities of the Department of Agriculture's Food and Consumer Service.

Our witnesses this morning include Mary Ann Keeffe, who is Acting Under Secretary for Food, Nutrition, and Consumer Services.

We also have with us the Administrator of the Food and Consumer Service, William Ludwig; George Braley, Associate Administrator, Food and Consumer Service; and Dennis Kaplan,

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Budget Officer with the Department of Agriculture's Office of Budget and Program Analysis.

We welcome you, Ms. Keeffe, and invite you to proceed to make whatever comments or remarks you choose regarding this budget request. You may proceed.

STATEMENT OF MARY ANN KEEFFE

Ms. KEEFFE. Thank you very much, Mr. Chairman. It is my pleasure to be here this morning before the committee. As you know, in my role as the Acting Under Secretary for Food, Nutrition, and Consumer Services, I have responsibility for the Nation's food assistance programs.

In addition to those that you mentioned, Mr. Chairman, also accompanying me today is Ms. Yvette S. Jackson, the Deputy Administrator for the Food Stamp Program.

Senator COCHRAN. Ms. Jackson, we welcome you, and thank you for your being here.

Ms. KEEFFE. Mr. Chairman, I am speaking to you at a time of historic change in the manner in which Government operates. This administration came into office 4 years ago with a number of goals for our nutrition programs.

CHILDREN'S NUTRITION

These goals included improving the nutrition and health of children by updating the nutrition standards of the School Lunch and Breakfast Programs, making benefits available for all who qualify and wish to participate in the Special Supplemental Nutrition Program for Women, Infants, and Children, reinventing Government by working in partnership with the States to increase program efficiency and reduce abuse, implementing antifraud legislation to increase Food Stamp Program integrity, and ending welfare as we know it by replacing it with a system that offers hope, demands responsibility, and rewards work. We have been quite successful in meeting these goals.

Our 16 nutrition assistance programs, which include the Food Stamp Program, Child Nutrition, WIC, Commodity Programs, Nutrition Education and Training, and our Center for Nutrition Policy and Promotion, work individually and in concert with one another to alleviate food insecurity, promote healthier diets for children and low-income adults, and improve nutritional knowledge among all Americans.

Taken together, these programs provide a vitally important nutrition safety net for Americans.

Mr. Chairman, in recognition of your committee's level of interest in our budget request for this year, I would like to explain briefly the request in a couple of areas.

For the Special Supplemental Nutrition Program for Women, Infants, and Children, the President's budget includes both a supplemental request in fiscal year 1997 to maintain participation at current levels and for fiscal year 1998, adequate funds to meet the goal of fully funding the WIC Program.

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WIC SUPPLEMENTAL

The fiscal year 1997 \$100 million supplemental request is needed to avoid a dramatic reduction in participation this year. We estimate that the current fiscal year 1997 appropriation will support average monthly participation of 7.2 million persons.

Participation was well over 7.4 million at the end of last year and has remained at approximately that level through the first quarter of fiscal year 1997. This implies that, in the absence of additional funds, participation will have to fall to about 7 million by September of this year, which would mean a reduction of over 400,000 mothers and children.

Our budget request assumes that unspent funds of approximately \$100 million will be carried over from fiscal year 1997 to fiscal year 1998.

WIC CARRYOVER

We believe that a structural carryover of this level, which is about 2.5 percent, does not suggest poor program management, but is inherent to the prudent management of the WIC Program.

The fiscal year 1998 request of \$4.1 billion would allow us to achieve our longstanding bipartisan goal of fully funding the WIC Program at 7.5 million participants. This represents a modest expansion from the current participation level of 7.4 to 7.5 million by the yearend fiscal 1998. While the economy has improved in the years since this goal was first established, this funding target is still well below the current estimated WIC-eligible population of 9.2 million persons.

The WIC Program has sought and achieved high participation rates; and we believe it is critical to preserve these achievements. The fiscal year 1998 request is \$378 million above the current fiscal 1997 level. However, only a small fraction of those funds, about \$30 million, are for increased participation.

The majority of the increase reflects the inflation-adjusted level needed to support the current 7.4 million participants. And the request also includes a \$100 million contingency fund, which would be used only if food costs are significantly higher than expected.

I would also like to mention that both the fiscal year 1998 request and the supplemental include appropriations language that would provide USDA greater discretion in distributing funds among States. This discretion is needed to minimize participation disruptions this year and to ensure that States are funded at levels consistent with their needs as the program enters a period of greater funding stability.

Mr. Chairman, I thank you and the members of this subcommittee for your continued support of these important programs. With your support, we have had remarkable success in alleviating hunger and promoting healthier diets. We have made dramatic changes.

Mr. Chairman, I, along with the Administrator, Mr. Ludwig, and the Director of the Center for Nutrition Policy and Promotion, have submitted detailed testimony for the record.

My colleagues and I will be happy to answer any questions.

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PREPARED STATEMENTS

Senator COCHRAN. Thank you very much, Ms. Keffe. Your statements will be included in the record in full. And we thank you for your cooperation and assistance to our committee.

[The statements follow:]

PREPARED STATEMENT OF MARY ANN KEEFFE

Mr. Chairman, Members of the Subcommittee, it is my pleasure to appear before you to discuss the President's fiscal year 1998 Budget Request for USDA's Food and Nutrition Programs. As you know, I am the acting Under Secretary for Food, Nutrition, and Consumer Services (FNCS), responsible for the Nation's domestic food assistance programs which provide access to a more nutritious diet for persons with low incomes and which encourage better eating choices among the Nation's children and their families. These programs include the anchor programs of Food Stamps, Child Nutrition and the Supplemental Nutrition Program for Women, Infants and Children (WIC). I am accompanied by William Ludwig, the Administrator of the Food and Consumer Service, George Braley, the Associate Administrator of the Food and Consumer Service, and Dennis Kaplan from the Department's Office of Budget and Program Analysis.

I am speaking to you at a time of historic change in the manner in which government operates. This Administration came into office four years ago with a number of goals for our nutrition programs. Those goals included improving the nutrition and health of children by reforming the 50 year old School Lunch and School Breakfast Programs and making benefits from the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) available for all who qualify and wish to participate. We also set about reinventing government by working in partnership with the States to increase program efficiency and reduce abuse. We implemented anti-fraud legislation to increase Food Stamp Program integrity. We ended welfare as we know it by replacing it with a system that offers hope, demands responsibility and rewards work. We have been quite successful in meeting these goals and in fulfilling our dual missions of supporting the agriculture economy and providing the nutrition safety net for low income Americans.

The mission of these programs is to improve the nutritional well-being of children and low-income families by helping them to make healthful food choices and provide access to nutritious foods for the people who need it. Our Nutrition Assistance Programs work both individually and in concert with one another to alleviate food insecurity and promote healthier diets for children and low-income adults and improve nutritional knowledge among all Americans. Taken together, these programs provide a nutrition safety net for low-income Americans. During the last four years FCS, together with this subcommittee, has made dramatic changes to these programs and achieved great results. Let me take a few moments to share some of our many accomplishments.

FOOD STAMP PROGRAM

The Food Stamp Program, the cornerstone of our Nutrition Assistance Programs expands and contracts with human need. In March 1994, the program served a historic number of low-income persons, 28 million in fact. Since then primarily due to economic improvements, it has contracted and is reaching over 10 million families—24 million people.

However, when the President signed into law the Personal Responsibility and Work Opportunity Reconciliation Act of 1996, he stated that some provisions must be readdressed in the future because they led to unwarranted harm to some families.

Our food stamp legislative proposals included in the President's fiscal year 1998 Budget address those concerns within the fiscal constraints of balancing the budget by fiscal year 2002. The proposals will increase the vehicle fair market value exclusion for fiscal year 1998 and begin indexing in fiscal year 1999. The proposals will impose a new tough but fair work requirement and disqualification penalty on those unemployed adults with no children who can work but refuse work; eliminate ineligibility of unemployed adults with no children who are willing to work but cannot find work and are not offered work opportunities by the private sector or the States because of high unemployment or lack of jobs in the area; provide additional funding to States to increase the availability of employment and training opportunities for unemployed adults with no children; and expand the State option for using food stamp benefits as a wage supplement to include participation by unemployed adults

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with no children. Additionally, we propose some changes limited to fiscal year 1997 for implementing the ban on food stamp receipt by current legal immigrant participants. Such changes will provide an extended opportunity for legal immigrants who are current food stamp participants to pursue and attain citizenship. By fiscal year 2002, our proposals will eliminate the cap on the excess shelter expense deduction to help families with children and high shelter expenses, and index the standard deduction.

Early in the Clinton Administration, we established six key principles for reforming the program: ensure economic responsiveness, provide for nutrition security, improve program integrity, modernize benefit delivery, expand State flexibility, and promote personal responsibility. These six principles formed the framework of not only administrative actions we have taken but also the major legislation proposed by the Administration in 1995 and 1996 that ultimately led to reform. They continue to guide our actions today.

Ensuring economic responsiveness and providing for nutrition security, our first two principles, are the aspects of the Food Stamp Program that distinguishes it from other Federal assistance programs. Welfare Reform assured the continued ability of the program to expand automatically to meet increased need when the economy is in recession and contract when the economy is growing. Food stamp benefits will continue to flow to eligible families in communities that face rising unemployment and poverty, cushioning the harsher effects of economic recession and stimulating weakening economies. Caseload reduction over the past 2½ years demonstrates this important aspect of the Food Stamp Program. For 30 years, the Food Stamp Program has been our pledge to “safeguard the health and well-being of the Nation’s population by raising levels of nutrition among low-income households.” Fulfilling this pledge means more than providing food. It means providing nutrition information and education, which is critical to improving the quality of diets, improving health, and reducing health care costs.

In our continuing effort to improve the health of all Americans through better knowledge of good nutrition, we have encouraged States to develop nutrition education and promotion programs, matching the money spent as part of the administrative cost of operating the program. In fiscal year 1996, 38 States had approved Food Stamp Nutrition Education Plans; up from just a handful of States 3 years ago. The Federal share of funding for these plans was \$20 million.

Program Integrity

Improving program integrity is our third principle. Two years ago, we proposed a comprehensive 13-point, anti-fraud legislative program for food stamps that attacked retailer trafficking, strengthened reauthorization controls, and allowed for stiffer penalties. Congress adopted, in some form, all of the Administration’s proposals. Welfare reform legislation also included several provisions directed toward recipients who violate program regulations. These provisions include doubled penalties, expanded claims collections procedures, and prohibitions against households receiving increased food stamp benefits in response to lower income because they are being penalized for failure to comply with the rules of welfare programs.

At the same time, we have reduced food stamp error rates. We have worked hard with the States and for the last two years error rates have fallen. The reduced error rates have prevented the loss of nearly \$350 million in erroneous payments in just two years, and we will continue with this work.

We are aggressively and unceasingly fighting food stamp fraud. Fraud in the Food Stamp Program or any program cannot and will not be tolerated. We have a responsibility to ensure that food stamp benefits are issued properly and accurately and are used for purchasing food. Preventing fraud is critical to ensure program integrity and to ensure that the program gets food to people who need it.

We are increasing our ability to visit food stores in person, by using the fiscal year 1997 appropriation of \$4.2 million to contract with vendors to procure documented observations of new applicant stores as well as those requesting to continue to participate in the program. This information is being used by our field offices to confirm applicant-supplied information, particularly that the store is in the business of selling an ample variety of staple food for home preparation and consumption.

We have coupled these achievements with our ongoing food stamp investigative efforts to ensure recipient access to food stores while limiting the program’s vulnerability to fraud, especially trafficking.

The use of intensive “sweeps” of many vendors has helped us identify the problem stores; and, just as important, it gets the message out to the public and to retailers that those who commit fraud will be caught. In the past calendar year we have conducted two such operations, “Trident” and “Five Points”. With FCS investigative resources alone, 734 stores were caught violating, 201 of which were caught traffick-

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ing. These operations took a combined total of 6 weeks. The media coverage will help provide a deterrent to other retailers from violating program rules. Also, the dollar amount of violation activity addressed through these operations was significant. The violating stores redeemed \$50 million in food stamp benefits the previous year.

We have continued to expand the Federal Tax Refund Offset Program (FTROP) to a total of 43 States and have added a Federal salary offset component. FTROP began as a pilot in 1992. Since that time, we have collected more than \$110 million which is returned to the Treasury. We expect this program to continue to grow until all States are participating.

We are modernizing benefit delivery, our fourth principle. Today, every State is planning for Electronic Benefit Transfer (EBT) implementation. We have progressed from just six operational sites in 1993 to eighteen today. By the end of this month, eight States will have Statewide systems. Approximately, 16 percent of all food stamp issuance now occurs through EBT. By the end of fiscal year 1998 we anticipate that about 40 States, representing 55 percent of all food stamp assistance, will have EBT in operation.

Expanding State flexibility, our fifth principle, is important because being responsive to the needs of our State partners helps assure their continued effective administration of the Food Stamp Program. The Administration's proposed food stamp reform legislation included provisions striking non-essential proscriptive, statutory requirements governing States' administrative practices. The proposed legislation also included authority for States to operate Simplified Food Stamp Programs for their welfare caseload. These legislative proposals, which were included in welfare reform legislation, were the second half of an earlier and on-going effort to review regulatory requirements and wipe unnecessary ones from the books.

Our sixth principle is promoting personal responsibility. The Administration proposed strong penalties for noncompliance with the program's work requirements and State options to require individuals to cooperate with the Child Support Enforcement program and to meet their obligations to support their children. These improvements were included in welfare reform.

As you can see Mr. Chairman, we have worked hard to reform the Food Stamp Program by retaining the National nutritional safety net, by establishing strong working partnerships with States, by improving program integrity, by expanding EBT, and by promoting personal responsibility.

CHILD NUTRITION PROGRAMS

The Administration has identified the Child Nutrition Programs as critical to fulfilling our national health responsibility. Through the National School Lunch Program, the School Breakfast Program, the Summer Food Service Program, the Child and Adult Care Food Program, and the Special Milk Program, FCS assists State and local governments in providing meals to children in a wide range of settings, including public and private schools, child care centers and homes, and summer recreation programs.

The Administration's fiscal year 1998 budget request seeks reduced funding for the Child and Adult Care Food Program (CACFP) when compared to prior year requests. The primary reason for this change is the method of making reimbursement payments to family day care homes contained in Public Law 104-193, the welfare reform legislation enacted on August 22, 1996. Public Law 104-193 replaced the former single payment rate method with a two-tiered reimbursement structure for family day care home reimbursement payments. As provided for in the statute, this new payment structure will be implemented effective July 1, 1997. The budget has been restructured accordingly.

As you know, we have taken a major step toward meeting our health responsibility through implementing the first full-scale reform of the National School Lunch Program in fifty years. USDA research showed that school meals—and children's diets overall—are too high in fat, saturated fat and sodium. This finding is extremely significant in light of scientific research that establishes the link between these dietary excesses and chronic diseases. We know that obesity, high cholesterol and high blood pressure are diet-related conditions that often begin in childhood. When we began the School Meals Initiative for Healthy Children, studies told us that 9 out of 10 children ate too much fat, too much saturated fat and 30 percent of children ate less than one serving of fruit a day. The effects on their future and on society would be devastating if we did not take action. Diet is associated with 5 out of the 10 leading causes of death in this country, including heart disease, and some cancers. Nutrition-related diseases cost society an estimated \$250 billion a year in medical care and lost productivity.

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The School Meals Initiative for Healthy Children updates the nutrition standards for school meals to be consistent with the Dietary Guidelines for Americans. This historic accomplishment means less fat, less sodium—and more balance—in children's diets. It means a potential improvement in children's health which will potentially have a substantial impact on health care costs and years of life. Estimates of value from similar dietary improvements for adults range from \$4 billion to over \$26 billion over 20 years due to improved life expectancy and reduction in early deaths.

Let me emphasize, however, that we did not simply mandate change on the school lunch plate and then walk away. We took several important steps to support schools, families, and communities in achieving the goal of healthier diets for our Nation's children. The Department dramatically improved the quality and availability of USDA commodities provided to local school districts. For example, reduced-fat peanut butter and cheese were made available to schools, enabling children to still enjoy food they like but in healthier forms.

Team Nutrition, launched in 1995, is a network of public/partnerships designed to promote making food choices for a healthy diet. It is based on the active involvement of over 200 National nutrition, education, health, agriculture and industry supporters and partners. Team Nutrition brings together stakeholders and builds community coalitions to bring healthier school meals and state-of-the-art training and technical assistance nutrition information to children and their families. We already have 17,000 schools serving over 9.8 million children actively participating in Team Nutrition.

Team Nutrition has two major components—technical assistance and training to support school food service personnel in providing healthful meals, and nutrition education to enable children to make food choices for a healthy diet. The technical assistance and training component provides state-of-the-art tools and techniques to improve meals. The nutrition education component is a multi-faceted education program. Team Nutrition uses research and science-based nutrition messages that reach children in a language they understand, building skills and motivating children to make food choices for a healthy diet. These messages have been integrated into the classroom curricula for elementary schools, materials for use wherever children live, learn, and play, including the cafeteria, and at home, as well as into nutrition education messages broadcast on National network media. For example, we have distributed a Tool Kit for Healthy School Meals, including a comprehensive set of new recipes, a training manual and a marketing guide to every school participating in the National School Lunch Program. All States and local school food service agencies have received "Serving it Safe," a training tool for food safety and sanitation. A complete operational kit for Assisted NuMenus has been provided for local schools; and food purchasing at schools has been enhanced with a food specification reference guide called "Choice Plus". We have provided National Healthy School Meals Training Workshops to "train the trainers" in meal preparation, and we have established on-line computer resources and information to support schools in meeting nutrition standards. Through Team Nutrition, we have also provided over \$6 million in Team Nutrition Grants to States to assist in implementation of the School Meals Initiative and will award another \$4 million in grants in 1997. Grant projects have included developing training programs for school food service personnel and a cafeteria classroom link to support nutrition education and healthy food choices. The National Food Service Management Institute is being provided \$800,000 for cooperative agreement work that includes an 800-phone-number help desk and a "Service on Site" project. Both of these efforts bring the services and expertise of the Institute to local food service operations. This training has been very well received by the school food service professionals.

With your support, Team Nutrition has accomplished much toward helping schools to provide healthier meals and to become the focal points for nutrition learning in their communities.

SUPPLEMENTAL NUTRITION PROGRAM FOR WOMEN, INFANTS, AND CHILDREN (WIC)

This Administration is committed to making WIC available to eligible women, infants, and children who wish to participate in the program. Mr. Chairman, I would like to express my sincere appreciation for the support this subcommittee has provided the WIC Program.

The strong bipartisan support reflects a recognition of a program that works and works well and is cost effective. WIC makes a positive difference in the health status of low income women, infants and children through the provision of supplemental food packages rich in needed nutrients, nutrition education and counseling, and referrals to local sources of health care. WIC also promotes breastfeeding as the

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feeding method of choice, furnishes drug, tobacco, and alcohol abuse information, and promotes immunization. Studies have documented that participation in the WIC Program results in real improvement in the health of participants, including fewer premature births, a lower incidence of low birthweight, fewer infant deaths, increased likelihood of receiving prenatal care, and improved children's diets.

In recent years, thanks to strong bipartisan support, WIC funding has increased substantially from year to year. In addition, food package cost containment efforts have succeeded in allowing participation to increase substantially. Since the beginning of this Administration, we have added over 1.7 million participants to the program. Our current budget request would allow us to meet the long-standing goal of providing funds to serve 7.5 million persons by the end of fiscal year 1998.

The successful expansion of the WIC Program presents significant management challenges. We fully recognize the need to manage the transition from this period of rapid growth to one of more stable funding and participation. Our budget request is an integral component of our strategy for managing this transition without disruptive swings in participation this year and the next. The supplemental we have requested for fiscal year 1997 would allow for an orderly transition from fiscal year 1997 to fiscal year 1998 by maintaining participation at approximately current levels. Without the supplemental, we believe States will have to reduce participation by several hundred thousand.

We are working with State agencies on better management reporting which will lead to more timely and accurate data and improved systems to forecast demand, needs and costs. FCS has requested that States submit more comprehensive and timely spending and caseload management plans for use in better forecasting of participation trends and in making needed adjustments in caseload to manage within grant levels. We are also working on integrity rules for vendors and studying the funds allocation process to see if it can be made more responsive to need.

FCS will encourage cost control strategies for State use in managing expenditures. Rebate strategies for foods other than just infant formula, selection of food vendors with lower costs and history of good program management, and the use of the most economically allowable WIC foods will continue to be emphasized as major cost containment techniques.

In times when resources cannot meet demand, benefits must be targeted to those most in need. FCS plans to review policy and regulatory requirements to insure more consistent eligibility assessments and to refine States' techniques for effectively targeting benefits.

We will continue to develop new and better strategies and tools to ensure the continued success and effectiveness of the WIC Program, and to guarantee that WIC continues to contribute actively and positively to the preservation of the good health and well being of the Nation's low income, at risk population of pregnant, breastfeeding and postpartum women, infants and children.

COMMODITY ASSISTANCE PROGRAMS

In fiscal year 1996, the Commodity Assistance Programs were reconfigured to combine the Commodity Supplemental Food Program, The Emergency Food Assistance Program and the Soup Kitchens and Food Banks Program. FCS is committed to supporting the agricultural economy while at the same time, providing a nutrition safety net for those most in need. Our fiscal year 1998 request reflects continued support for our commodity programs, including the use of funds made available through the Food Stamp Program for purchasing commodities for distribution to States under the Food Distribution Program on Indian Reservations and the Emergency Food Assistance Program. This change further demonstrates our commitment to streamlining the commodity programs and providing States more flexibility. It also demonstrates our on-going efforts to respond to and better serve the needs of our clients.

In addition, we provide commodities to those in need of as a result of disaster situations. FCS is one of the first Federal agencies on the scene to provide disaster relief.

The Administration also supports food recovery. Food recovery allows us to share food resources that would otherwise be wasted. This activity is accomplished mainly through volunteerism. For example, TEFAP providers generally distribute large quantities of commodities donated by the private sector. Although our budget request does not specifically earmark funds for food recovery, TEFAP administrative funds may be used for this purpose.

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CENTER FOR NUTRITION POLICY AND PROMOTION

USDA's Center for Nutrition Policy and Promotion (the Center) was created on December 1, 1994, as part of the USDA reorganization. The Center is a classic example of how a small amount of resources can be leveraged to better serve the consumer. The best example of this was the release of the Dietary Guidelines for Americans. Our Center led the consumer research and co-chaired the interdepartmental work group with the Department of Health and Human Services that produced this key statement of Federal nutrition policy. This work showed how the Center fulfilled its mission as the focal point within USDA for linking scientific research to the consumer.

This year the Center is fulfilling its mission by completing a set of highly significant products. It is reporting on the nutrient content of the U.S. food supply—a key link in monitoring nutritional status in the United States; it is updating the Healthy Eating Index—a measurement of how well Americans are eating; and it is adapting the Food Guide Pyramid specifically for children. The Center is also positioning itself to launch, in fiscal year 1999, a National nutrition promotion campaign stressing the many consumer-oriented benefits of healthy eating.

RESEARCH AND EVALUATION

The three FCS research accounts are used to determine if policy objectives are met; test innovations; and describe what works, what does not work, and why. These accounts are instrumental in enabling the Agency to respond to the oversight responsibilities of Congress and have a proven track record of improved government performance. For example, FCS research made critical contributions to the emergence and expansion of Electronic Benefit Transfer, supporting the first demonstrations of feasibility and cost-effectiveness; helped to fight fraud and abuse and improve program operations, generating the first, and only, data-based estimates of the prevalence of food stamp trafficking and WIC overcharging practices; documented the Federal cost savings associated with participation in the WIC program; and, provided the foundation for historic changes in the school nutrition programs by determining the nutrients available in the school lunch and breakfast programs.

With the funding requested for fiscal year 1998, the Agency will be able to support efforts to help States identify effective ways to design programs using the new flexibility provided by welfare reform and understand the consequences of change, continue critical updates of basic program information; address fully Congressional questions about the impact of legislative changes on family day care homes; and collect and analyze data to provide Congress with outcome measures of program performance.

The relatively small expenditures made on research will help to protect the \$40 billion investment made in the Federal nutrition programs. Without such research support, we run the risk of making crucial policy decisions without adequate knowledge of the consequences.

FOOD PROGRAM ADMINISTRATION (FPA)

The FPA appropriation funds most of the salaries and expenses of the Food and Consumer Service, and is the critical account that ensures the effective use of other program appropriations. Efforts of Agency staff have resulted in progress toward improving the nutrition of program participants, strengthening program integrity, and implementing EBT Nationwide. These results were achieved despite staff reductions which in 1995 enabled FCS to meet its fiscal year 2000 streamlining target in accordance with the National Performance Review and the Vice President's goal of reducing the Federal work force. In spite of declining staff and overall systems resources, we have made significant improvements to our financial management operations. Our efforts have resulted in tighter controls over our financial resources and financial statement preparation. We are pleased with our progress to date. However, as a result of recent FPA funding reductions, FCS is now only able to deploy staff from crisis to crisis, which is proving insufficient for effective program administration.

Historically, the FPA account has been funded below the President's request. The fiscal year 1998 administrative request is a "bare bones" request. The Agency simply cannot sustain additional reduction in staff or funding without seriously impairing its ability to provide children and low-income families access to our Food Assistance Programs and provide basic program integrity oversight. Mr. Chairman, our administrative budget is less than one-third of one percent of total FCS budget authority. Providing less funding than our request may place billions of Federal dollars at risk to increased program fraud and abuse. In fact, our ability to prevent as well as re-

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solve problems identified in the past by GAO depend in part on sufficient administrative funding. The Food and Consumer Service, funded at the requested level, will continue serving as a model for Federal government efficiency.

CONCLUSION

Mr. Chairman, I would like to take this opportunity to thank you and members of this Subcommittee for your continued support of our Nutrition Assistance Programs. With your support, we have had remarkable success in alleviating hunger and promoting healthier diets for children and low income families. We have made dramatic changes—changes that will have a lasting effect on the recipients of our programs. Our fiscal year 1998 request reflects our continued efforts to provide a nutritional safety net for Americans and to provide adequate oversight of these programs. This concludes my statement. The testimony of William Ludwig, Administrator for the Food and Consumer Service presents more of the technical aspects of our request. Additional information on the Center will be provided by Eileen Kennedy. I request that both statements be submitted for the record. I will be happy to answer any questions that you may have.

PREPARED STATEMENT OF WILLIAM E. LUDWIG

Mr. Chairman, thank you for the opportunity to appear before this subcommittee to discuss the fiscal year 1998 budget request proposed for the U. S. Department of Agriculture's Nutrition Assistance Programs and the Food and Consumer Service (FCS). As the Administrator of FCS for the last three years, I want to take the opportunity to point out the exceptional performance of the agency during a period of extraordinary change and diminishing resources. Just in the past year, FCS has begun implementation of the historic changes effected by Welfare Reform, significantly improved its financial management and continued the expansion of the School Meals Initiative for Healthy Children. During this time, EBT has grown from a small experiment to the method for Food Stamp Benefit issuance. All of these major efforts have been accomplished with a declining staff, while many requirements, such as those in financial management, have continued to increase. I cannot say enough about the extraordinary efforts of the FCS staff under these difficult circumstances.

BUDGET REQUEST 1997 SUPPLEMENTALS

I want to begin my testimony on the particulars of the President's Budget request by discussing the need for supplemental appropriations for fiscal year 1997 in the Women, Infants and Children (WIC) and Nutrition Education and Training (NET) Programs.

A supplemental appropriation of \$6.25 million is needed in Child Nutrition to complete funding for NET. The cost of this supplemental is fully offset by a one-time reduction in food stamp funding for commodity purchases for The Emergency Food Assistance Program (TEFAP). We have recently shifted \$3.75 million from Team Nutrition to NET to continue the program in fiscal year 1997 until you can act on our supplemental request. The Appropriations Act for fiscal year 1997 did not include funds for NET because the program was funded by a permanent appropriation when the Appropriations Act was passed. The permanent appropriation was repealed by the subsequent enactment of Welfare Reform. We believe that it was an oversight that NET received no funding in fiscal year 1997. We are pleased that we were able to provide stop-gap funding to maintain the long-established network of State NET coordinators until the Congress can act on our supplemental request.

A supplemental appropriation of \$100 million is needed for the WIC program to assure that participation is maintained throughout fiscal year 1997 at approximately 7.4 million, the fiscal year 1996 year-end levels. Without the supplemental, WIC will experience a significant reduction in participation during 1997. This, in turn, would negatively impact our ability to meet 1998 goals for full funding in an orderly manner. This extremely cost effective program has benefited many needy and vulnerable people for many years. Since its modest start in 1972, the number of women, infants and children receiving food and health care, and achieving healthier lives has grown from a few thousand to last year's year-end level of 7.4 million. WIC is making a real difference in the health of pregnant women and infants, thus saving large health care costs in future budgets. Without this supplemental, participation could decline by several hundred thousand women, infants, and children. We are requesting that the Secretary be provided discretion to distribute funds among States outside the current regulatory funding formula. We would

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use this discretion to avoid disrupting service to high priority participants and ensure that States avoid large participation drops.

1998 BUDGET REQUEST

The Food, Nutrition, and Consumer Service requests \$40.6 billion in new budget authority in fiscal year 1998. This includes contingency reserves of \$2.5 billion for the Food Stamp Program and \$100 million for the Supplemental Nutrition Program for Women, Infants, and Children (WIC). The request is a decrease of \$258 million below the fiscal year 1997 appropriation level, based on continuing economic improvement and welfare reform. The President's 1998 request also contains policy proposals that will ameliorate some of the harsher aspects of welfare reform.

FOOD STAMP ACCOUNT

The Food Stamp account now contains funding for the Food Stamp Program and its alternatives, the Nutrition Assistance Program for Puerto Rico and the Food Distribution Program on Indian Reservations. Welfare Reform legislation also added section 27 to the Food Stamp Act which provides Food Stamp account funding for commodity purchases for TEFAP.

The Food Stamp Program is the primary source of nutrition assistance for low-income Americans. The mission of this nutrition security program is to assure low-income Americans access to a nutritious, healthful diet through food assistance and nutrition education, thereby improving the nutritional status of low-income households and strengthening the agricultural economy. We are requesting \$27.6 billion for the Food Stamp Program, including a contingency reserve of \$2.5 billion that will ensure available funding for any unforeseen circumstances, such as economic disturbances, natural disasters and Welfare Reform changes in the cash assistance programs that could lead to fluctuations in Food Stamp costs. Our request also includes \$1.2 billion for the Program of Nutrition Assistance for Puerto Rico, as well as funds for nutrition assistance for the Northern Marianas and American Samoa.

Under the current economic forecast for fiscal year 1998 we project that: The average rate of unemployment is expected to be 5.5 percent in 1998; program participation will average 23.4 million persons monthly in 1998; and the Thrifty Food Plan, will be \$415.00 for a family of four. These factors will result in an average monthly benefit of \$77.27 per person.

The number of program participants declined throughout fiscal year 1996, an indication of a strengthening economy. Throughout most of fiscal year 1996 and continuing into the early months of 1997, the number of food stamp recipients remained at approximately 1 million less each month than participation was for the same month in the previous year. This steady decline, which started in August of 1994, resulted in the Food Stamp Program spending \$3 billion less than it would have had participation not declined. This trend reflects the Food Stamp Program's ability to respond to changing economic conditions, expand in times of rising poverty and unemployment, and shrink as the economy improves.

The requested benefit reserve takes on new importance in light of dramatic changes effected by welfare reform. States have a great deal of latitude in implementing these changes. Welfare Reform has given States broad new authority under the Temporary Assistance for Needy Families block grant. The choices States make concerning the level and form of benefits provided can affect Food Stamp Program costs dramatically. For example, if States decide to reduce cash assistance, food stamp costs will increase. The benefit reserve serves as insurance in the event of unforeseen changes in the implementation of Welfare Reform. The benefit reserve provides the mechanism to protect the program's ability to get food to people who need it and to ensure that benefits will continue to be available for eligible low-income children, elderly, families and individuals.

FOOD STAMP PROGRAM PROPOSALS

The Personal Responsibility and Work Opportunity Reconciliation Act of 1996, signed by the President on August 22, 1996, is a historic law, for it has dramatically changed the cash welfare system. It promotes self-sufficiency and personal responsibility, it enhances State flexibility, it simplifies program administration, and it strengthens program integrity.

However, the President has also said that some provisions will cause unfair and unwarranted harm to many families. Our food stamp legislative proposals address those concerns within the fiscal constraints of balancing the budget by fiscal year 2002.

—They will create a real work requirement for unemployed adults by significantly increasing work opportunities, providing funds to create work slots so that al-

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most all individuals subject to the time limit who are unable to find employment would be offered a work slot, and establishing a tough sanction so that individuals are forced to make the choice of living up to the responsibilities of accepting food assistance or becoming ineligible for the program.

- They delay the implementation and deadline dates for removing legal resident participants from the program to help ensure a more orderly implementation and allow immigrants additional time to seek naturalization.
- By fiscal year 2002, our proposals will eliminate the cap on the excess shelter expense deduction to help families with children who have high shelter expenses.
- They will resume indexing the standard deduction in fiscal year 2002 to prevent further decline in the real value of this deduction.
- They will raise and index the vehicle fair market value exclusion, recognizing that access to reliable transportation is critical to finding and keeping employment.

We estimate that these proposals will increase Food Stamp Program costs by \$365 million in fiscal year 1997 and \$805 million in fiscal year 1998.

FOOD STAMP PROGRAM ANTI-FRAUD ACTIVITIES

Combating fraud and abuse in the Food Stamp Program remains a high priority of this Administration. Our strategy is to prevent fraud by ensuring that only legitimate stores participate in the Food Stamp Program and by strengthening penalties against those entities that violate program rules. USDA has also moved forward under new and existing statutory authority to enhance our ability to eliminate program violators and better enforce fines and penalties.

Our request supports measures that will eliminate retailers who misuse benefits and remove barriers to EBT expansion—both of which will strengthen the link between the Food Stamp Program and a healthful, nutritious diet. The Administration believes that the actions currently underway will provide significant deterrent to food stamp fraud.

We initiated a contract in fiscal year 1997 to use private vendors to increase the number of pre-authorization visits to stores wanting to participate in the program. Visits under this contract will begin this summer. Our fiscal year 1998 budget includes funding to continue contracting with private vendors to increase the number of on-site retailer visits and related FCS expenses. Funds for both years will finance contracts for pre and post authorization visits by contractors and related expenses such as follow-up visits by FCS staff and increased reviews of appeals from those stores denied participation in the program. These on-site visits are an important part of our efforts to ensure that only eligible stores are allowed to accept food stamps and restore confidence in the Government's management of the program. This requested funding will be used to ensure initial and continued store eligibility. FCS will continue to aggressively fight Food Stamp fraud and abuse. Administratively, the Agency will also continue to work on its own as well as with OIG and State and local officials to eliminate ineligible stores from the program. Over the past two years, the number of stores authorized to accept food stamps has declined from over 210,000 in September, 1994 to about 193,000 today.

FOOD STAMP PAYMENT ACCURACY

Payment accuracy will continue to be a major management focus. I am pleased to report to you that the States and my Agency, working together, have brought food stamp payment error down from 10.8 percent in 1993 to 9.7 percent. This has averted erroneous payment of nearly \$350 million in the last couple of years. However, 9.7 percent is still too high and we are concerned that the complexity of implementing Welfare Reform may distract State managers from continuing our successful campaign to reduce error rates. We will redouble our effort so that we can come back in future years and continue to bring you good news on error rates.

ELECTRONIC BENEFITS TRANSFER

In fiscal year 1998, the Administration will keep expanding the electronic delivery of Food Stamp Program benefits. Electronic Benefits Transfer (EBT) systems modernize delivery cost-effectively while improving recipient service, State management, benefit security, financial tracking, and fraud detection. EBT operates like a debit card system for recipients' food accounts.

All States have the option to use EBT and 18 States have already implemented EBT systems, delivering 15 percent of all Food Stamp Program benefits. Eight States—Maryland, New Mexico, South Carolina, Texas, Kansas, North and South Dakota and Utah—have Statewide EBT systems. Every other State is in the process

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of planning for or implementing EBT. This represents enormous progress in the last three years and demonstrates a growing consensus that EBT is effective and efficient. We will eventually eliminate paper coupons along with the stigma associated with using them and the inefficiencies of processing them. EBT not only supports the nutritional purpose of our program with a user friendly system, but is also beneficial for every stakeholder involved. Recipients, States, stores, banks, and the taxpayers all win.

FOOD STAMP TAX OFFSET EXPANSION

We are progressing in our efforts to expand the agency's debt collection efforts. In fiscal year 1991, the Department initiated a test for collecting claims that resulted from household error through Federal income tax refund offsets. Between calendar year 1992 and 1995, the number of participating States grew from 2 to 32 and collected a total of \$70 million. In calendar year 1996, 40 States participated and collected \$40 million in the Tax Offset Program. Collections from this program are estimated at \$35 million in fiscal year 1998. Welfare Reform has given FCS the authority to continue expanding this collection tool and we are encouraging all States to participate.

THE FOOD DISTRIBUTION PROGRAM ON INDIAN RESERVATIONS (FDPIR)

This program, a variant on the delivery mechanism of benefits under the authority of the Food Stamp Act, has recently begun to grow after several years of decline. There is currently \$65 million available in fiscal year 1997 and \$75 million is requested for fiscal year 1998. With the high unemployment in many FDPIR areas, concurrent with operation of food stamps, and the potential for Welfare Reform waivers of food stamp work requirements, we are not sure how much more growth to expect.

CHILD NUTRITION PROGRAMS

The purpose of the Child Nutrition Programs is to assist State and local governments in providing food services that serve healthful, nutritious meals to children in public and nonprofit private schools, child care institutions, certain adult day care centers, and summer recreation programs. We are requesting a total of \$7.8 billion for the Child Nutrition Programs. The request is \$870 million lower than the 1997 appropriations because we anticipate funds will be available from 1997. Welfare Reform legislation changed the rates paid per meal in the lunch and breakfast programs by rounding down the payments to the nearest cent and made substantial changes in the eligibility criteria for the Child and Adult Care Food Program and its payments structure. This budget request will provide the funding necessary to support the National School Lunch, the School Breakfast, Summer Food Service, the Child and Adult Care Food and the Special Milk Programs. We estimate that in fiscal year 1998 these programs will support: 4.4 billion school lunches, 1.2 billion school breakfasts, 1.7 billion meals in centers and family day care homes, 144 million summer food service meals, and 154 million half-pints of milk.

This request reflects the administration's commitment to improving the nutritional status of the Nation's children. FCS will also continue its efforts to streamline the administration of the Child Nutrition Programs at the State and local levels through promulgation of regulations and policy issuances affecting each of the programs.

SCHOOL MEALS INITIATIVE FOR HEALTHY CHILDREN

The USDA School Meals Initiative for Healthy Children is a comprehensive integrated plan to ensure that children have healthy meals at school. A major part of this plan is the historic update of nutrition standards so that school lunches and breakfasts meet the Dietary Guidelines for Americans. However, just enacting policies will not make this change a reality for every child, and USDA cannot accomplish this historic change alone. That is why USDA established Team Nutrition, a Nationwide integrated program designed to support implementation of the School Meals Initiative for Healthy Children.

The mission of Team Nutrition is to improve the health and education of children by creating innovative public and private partnerships that promote food choices for a healthful diet through the media, schools, families, and the community. It supports implementation of updated nutrition standards through two coordinated approaches—Nutrition Education and Training and Technical Assistance.

Nutrition Education is provided through a comprehensive, integrated program designed to build skills and motivate children to make food choices for a healthy diet

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in accordance with the Dietary Guidelines for Americans. This effort brings proven, focused, science-based nutrition messages to children in a language that they understand while strengthening social support for healthy children's diets among parents, educators, and food service professionals.

Team Nutrition is built around a framework of in-school and public communication efforts, with a focus on local schools and communities to support implementation of updated nutrition standards. Innovative educational resources are developed and distributed through supporter networks, directly by FCS and USDA's Cooperative State Research, Education, and Extension Service, and through other government agencies such as the Department of Education and the Department of Health and Human Services. Support is focused at the local level through Team Nutrition Schools, which actively engage children and their parents, food service staff, teachers, agricultural organizations, and other leaders in their communities to improve school meals. There are now over 17,000 Team Nutrition Schools across the country, and the number continues to grow.

Training and Technical Assistance is a "change-driven" program providing support to school food service personnel implementing the Dietary Guidelines for Americans. This effort will ensure that school nutrition and food service personnel have the education, motivation, training, and skills necessary to provide healthy meals that appeal to children and meet USDA's nutritional requirements. These personnel will also have a clear vision of their role in the school community and as integral team members of comprehensive school health programs.

In fiscal year 1998, FCS requests \$10 million for this two-pronged effort. These funds are critical to supporting schools' efforts toward achieving full implementation of the Dietary Guidelines in school meals. We will use the funding to support several important activities. Team Nutrition will continue to provide technical assistance and training for food service professionals and nutrition information that empowers children and families to make healthy food choices. We will accentuate the importance of public-private partnerships in order to maximize the Federal dollars available for this endeavor. The number of Team Nutrition schools will continue to grow, engaging additional children and their families, teachers, food service staff, agricultural organizations and other community leaders in improving school meals.

CHILD NUTRITION INTEGRITY

In keeping with the Department's commitment to make our programs more effective, FCS aggressively pursues suspension and debarment actions whenever suitable cause exists. To that end, FCS formed a task force dedicated to this effort and joined forces with the Department of Justice and the Defense Logistics Agency to identify offenders. At the time of our budget request, FCS had identified 221 individuals and corporations subject to suspension and debarment determinations; actions had been initiated against 202. Final administrative action had been taken in 159 cases with 80 entities debarred for 3 years from involvement on a nonprocurement basis with all Federal Programs. Compliance agreements aimed at protecting the Federal interest had been signed or were under discussion for 51 other corporations. FCS will continue to pursue appropriate debarment action as necessary.

Furthermore, coordinated review efforts attempt to improve school management of the National School Lunch Program through evaluation of the local meal service data and provides training and technical support to help improve local program accountability. Reviews have been conducted at over 7,000 schools.

SUPPLEMENTAL NUTRITION PROGRAM FOR WOMEN, INFANTS & CHILDREN (WIC)

The purpose of the WIC Program is to improve the health of nutritionally at risk, low-income pregnant, breastfeeding and postpartum women, infants and children up to their fifth birthday. The Budget requests \$4,108 million in 1998, an increase of \$378 million over the 1997 appropriated level. The size of the increase over 1997 is somewhat misleading, however, for several reasons. One, it does not reflect the proposed 1997 supplemental request of \$100 million. Two, it includes a contingency fund of \$100 million to guard against unanticipated food price costs. The contingency fund is assumed to have no outlays. Three, reductions in carryover funds from \$145 to \$100 million in 1997 provide \$45 million in additional program resources in 1997. Since carryover is assumed to remain constant at \$100 million in 1998, an additional \$45 million in Budget Authority is needed to maintain the same program level in 1998. When these three factors are accounted for, the Budget Authority request increases by only \$133 million between 1997 and 1998. Over \$100 million of the increase is needed to cover inflationary increases in program costs. Only about \$30 million is used to expand participation in 1998.

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During fiscal year 1996, the program continued to provide service to low-income women, infants and children at nutritional risk. Average participation in WIC for fiscal year 1996 was 7.2 million persons per month. For fiscal years 1997 and 1998, average participation is estimated at 7.40 and 7.45 million persons per month, respectively.

A major reason for WIC's success has been access to health care as well as an emphasis on nutrition education and provision of supplemental foods. Emphasis is placed on the benefits of breastfeeding, as well as the dangers of substance abuse including smoking during pregnancy. WIC also serves as a gateway to other related health and social services, such as prenatal care, well-child care, Medicaid, and immunization programs. Studies published by USDA and other groups have found that participation in WIC is highly cost effective and results in improved birth outcomes and reduced health care costs. During the past seven years, participation in this program has increased by over 70 percent, with the largest increases being in children's participation.

WIC COST CONTAINMENT INITIATIVES

All WIC State agencies and most Indian Tribal agencies have implemented some measure of cost containment activities in order to use their food grants more effectively. The use of infant formula rebates continues to be the most successful cost containment method. This subcommittee's support for WIC appropriations is evident from the program's growth. However, we cannot ignore contributions from successful cost containment efforts. This activity will help USDA to reduce formula cost by over \$1.2 billion in fiscal year 1997 which in turn allows the program to reach 1.7 million more participants each month.

WIC FUNDING ALLOCATION FORMULA

The Department is requesting authority to waive selected aspects of the grant allocation formula while awaiting regulatory revision. The current formula worked well when the program was growing rapidly. It is less well suited to allocating funds among States as the program moves closer to the goal of full funding. The rule making will update the formula to better serve the needs of a more stable full-funded program.

COMMODITY ASSISTANCE PROGRAMS

The Commodity Assistance Programs combines funding for the Commodity Supplemental Food Program (CSFP), administrative funding for The Emergency Food Assistance Program (TEFAP), The Nutrition Program for the Elderly (NPE) and Pacific Island Assistance. The budget requests:

- \$86 million in support of 123,900 women, infants, and children and 187,600 elderly in CSFP. In contrast to fiscal year 1997, when \$16 million of fiscal year 1996 funding was available to support this program, no funds from fiscal year 1997 are available for program operations in fiscal year 1998. This budget request will therefore necessitate a reduction in elderly participation.
- \$45 million for TEFAP administrative expenses plus the \$100 million available in the Food Stamp Account, allowing for a total program cost of \$145 million.
- \$140 million for NPE, which will fund an estimated 248 million meals at a payment rate of 56.4 cents per meal.
- \$1.2 million for Pacific Island Assistance, which will fund the nuclear affected islands, disaster relief for non-Presidentially declared disasters and the Freely-Associated States. This reduced funding is consistent with the phase-out of the Freely Associated States.

RESEARCH AND EVALUATION

The fiscal year 1997 appropriation severely restricted the funds available for research and evaluation on the grounds that the number of studies underway at FCS appeared high. The President's budget request includes \$17 million to partially restore these accounts to their historic levels.

There is a critical need for research and evaluation. FCS research is used to determine if policy objectives are met and to describe what works, what doesn't, and why. Research activities are instrumental in enabling FCS to respond to the oversight responsibilities of Congress; provide assistance to States to identify and share best practices; measure the effectiveness of program operations and alternatives; and provide objective, reliable outcome measures of program performance.

The Agency's research has a proven track record of improved government performance. For example, FCS research has:

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- Made critical contributions to the emergence and expansion of EBT, supporting the first demonstrations of feasibility and cost-effectiveness;
- Helped fight fraud and abuse by generating the first, and only, data-based estimates of the prevalence of food stamp trafficking;
- Determined the nutrients provided to school children in school lunches and breakfasts, leading to the first update of nutrition standards in school nutrition programs in 50 years; and
- Documented every dollar invested in prenatal WIC participation saves an average of \$3 in Medicaid costs during the first 60 days after an infant's birth.

The number of studies may appear large because we deal with multiple programs that are highly complex with many stakeholders and policy audiences, and we face a broad array of research issues related to food security, work, health, family, economic well-being, program management and program integrity. Our studies collect impartial and relevant data, use techniques that meet the highest standards of accepted scientific practice, and provide objective analyses. The investment in FCS research has proved beneficial over the years. We serve the needs of many audiences, and the technical credibility of our products is well established.

With the funding requested in the President's budget, the Agency will be able to:

- Expand efforts to assess the consequences of Welfare Reform on Food Stamp and Child Nutrition Program clients;
- Continue critical updates of basic program information, including the characteristics of food stamp participants and changes in nutrients available in school nutrition programs following the School Meals Initiative meal pattern improvements;
- Focus WIC research on improving program management and efficiency and improve WIC eligibility determination tools as recommended by the Institute of Medicine; and
- Expand development of cost-effective ways to improve program integrity and reduce administrative costs, focusing on operational improvements to reduce error and fight trafficking. Additional funds would enable extensions of ongoing work on recipient and retailer trafficking to better target investigations.

Restoring the investment in FCS research is critical in light of Welfare Reform, the most sweeping set of changes in social policy in the last 60 years. Congress needs to make an investment in policy-relevant research.

Our research request of \$17 million represents less than one half of one tenth of one percent of our investment in our programs. This is a tiny investment to provide vital information about how effectively we are spending \$40 billion annually.

GOVERNMENT PERFORMANCE AND RESULTS ACT

We have developed a five-year Strategic Plan in response to the requirements under the Government Performance and Results Act (GPRA) of 1993. This Strategic Plan defines the Agency's goals and objectives for all its nutrition assistance programs as well as administration and financial management. Each goal and objective is accompanied by one or more performance measures. In addition, we are developing the Annual Performance Plans required by GPRA. These plans are derived from the Strategic Plan and their activity outcomes are designed to contribute directly to meeting the Agency's strategic goals and objectives. We are also coordinating strategic planning with other agencies within the Department as a part of a USDA-wide effort to improve nutrition assistance and education.

FOOD PROGRAM ADMINISTRATION

Funding for the Food Program Administration is requested in the amount of \$105.5 million. The FPA appropriation funds the majority of the salaries and administrative expenses of FCS, although a small portion of these expenses are funded from program appropriations. The efforts of agency staff during fiscal year 1996 resulted in progress toward improving the nutrition of program recipients, strengthening program integrity, and implementing EBT Nationwide. However, due to restrictive staff year ceilings in the Food Stamp and Child Nutrition accounts, and continuing yearly reductions of 60 to 80 staff years in the FPA appropriation, we have only been able to deploy staff from crisis to crisis, which is making continuous, effective program administration nearly impossible.

The administrative resources required to keep pace with changing program needs and to implement new financial management initiatives such as: Federal Financial Management Improvement Act, Government Performance and Results Act, Government Management and Results Act, Debt Collection Improvement Act, Cash Management Improvement Act, and the Chief Financial Officers Act have further strained available staff years. Outside authorities, including GAO and OIG, have

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consistently called for additional staff to improve program oversight. Clearly, ensuring proper fiscal and program management for an agency managing over \$40 billion in program funds must be a top priority.

While the agency has struggled to maintain adequate program oversight by prioritizing its work and implementing numerous efficiencies, the dramatic loss in staff has stretched available FPA resources to the breaking point. It is imperative that FCS maintain a steady work force to meet the challenges of nutrition program delivery and keep up with new legislation such as Welfare Reform. Further resource reductions will most certainly result in increased risk to program integrity and possibly require significant organizational changes, including closure of Regional offices and reduction of program oversight functions.

Without the necessary staff to properly implement, control, and maintain accountability over FCS program funds, Federal oversight, financial reporting, and fiscal management to protect Government interests will suffer. FCS long ago met its fiscal year 1999 streamlining target in accordance with the National Performance Review and the Vice President's goals of reducing the Federal work force. The FCS administrative budget is a "bare bones" request. For the past several years, we have requested increases, which were not approved by the appropriations committees. This year's request is nothing more than last year's funding level plus half the inflation needed to offset mandated salary increases. No funding is requested for updating the agency's automated infrastructure, which demands attention. The agency simply can not sustain additional reductions in staff or funding without seriously impairing its ability to provide children and needy families with access to a more healthful diet through its Food Assistance Programs, nor can we maintain adequate vigilance over the resources entrusted to us by the Congress on behalf of the American taxpayer.

CONCLUSION

Since its inception in 1969, the goal of FCS has been to provide food and nutrition assistance for the Nation's children and low-income families. We are committed to achieving this goal as efficiently and effectively as possible. We believe that our request of \$40.6 billion and each proposal contained therein is crucial to continued efficient program operations.

Mr. Chairman, this summarizes the fiscal year 1998 FCS budget request. I will be happy to answer any questions that you may have.

PREPARED STATEMENT OF EILEEN KENNEDY

Good morning Mr. Chairman and Members of the Committee. I am Dr. Eileen Kennedy, Executive Director, of the Center for Nutrition Policy and Promotion (the Center) within the Food, Nutrition, and Consumer Service mission area of the U.S. Department of Agriculture. I am delighted to tell you about the exciting and innovative work our Center is doing and planning for the Department and for all Americans.

As the lead Federal Agency in human nutrition, the Department is charged with developing nutrition policy and conducting science-based nutrition education programs for all Americans, including those involved in Food Assistance Programs. Our Center, established in 1994, is the Department's focal point for linking scientific research to the consumer. It accomplishes this mission by developing and analyzing National survey data on food consumption, nutrient content of the U.S. food supply, food groups and recipes; by analyzing trends and determinants of dietary behavior, including responsiveness to consumer-oriented nutrition promotions; and assessing impacts of alternative approaches to improving the nutritional quality of American diets. To continue this work in fiscal year 1998, we are requesting \$2.499 million for the Center.

The Center is an exciting model of how the Federal government can be reinvented to leverage a relatively small investment into impressive achievements. Capitalizing on its multi-disciplinary, highly motivated and diverse staff, in fiscal year 1996, the Center produced (1) the "Nutrition Action Themes for the United States" that supported the U.S. delegation at the World Food Summit in Rome, Italy; (2) the report, "Expenditures on Children by Families" used by 50 percent of States in setting foster care payments; (3) food plans, including the Thrifty Food Plan, that constitute the basis for the Food Stamp Program benefits and military food cost allowances; and (4) "The State of Nutrition Education: A Report to the Secretary" that provided the first self-assessment of the Department's nutrition education programs and helped formulate a nutrition education policy for the 21st Century that meets the requirements of the Government Performance and Results Act.

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As a result of the Center's activities, Americans have a better understanding of good nutrition and a good diet. For example, recent survey data indicate that 60 percent of Americans recognize the Center produced Food Guide Pyramid. In addition, because the Center's activities and long rich history of nutrition education within USDA, significant, positive changes in the American diet are occurring. The percent of calories from fat has dropped from 40 percent to 33 percent. However, the challenge of improving the American diet continues. A government review in the summer of 1994, indicates that at the current rate of change, we will not meet the Year 2000 goals for reductions in fat and saturated fat. Continued efforts in nutrition promotion are critical. Within USDA, the Center will have a key role in nutrition promotion for all Americans.

The Center achieves its accomplishments using a few key strategies. First, a dynamic core of analysts from the disciplines of nutrition, food science, agricultural and consumer economics, social marketing, and computer and telecommunication specialties permits the Center to conduct significant in-house analysis and produce appropriate products for a variety of key customers. Second, the Center leverages its relatively small resources by entering into partnerships and alliances. For example, the Center spearheaded the "Community Nutrition Action Kit" by working with the Cooperative State Research, Education, and Extension Service to bring state-of-the-art nutrition education into every county in the Nation. This cost-effective project produced 35 fund and interactive activities for children, their families and their communities to promote food choices for a healthy diet. For another example, the Center represented the Department in the Dietary Guidelines Alliance—a new alliance of food industry, health organizations, and government to help consumers implement "The Dietary Guidelines for Americans." The Alliance's consumer-tested messages will be highlighted in March 1997 during National Nutrition Month.

In fiscal year 1997, the Center embarks on an enhanced mission to provide a vision for the 21st Century of how the Department of Agriculture can effectively apply science-based research from nutrition, economics, consumer marketing research, and other relevant disciplines to the challenge of recreating U.S. nutrition policy for a new Century. The Center is executing a strategy for identifying the needs of its most important customers—including decision makers and news makers who help disseminate messages—to provide them with targeted information in the form they can use best. Working with many close partners, the Center is completing a set of highly significant products—Thrifty Food Plan, Nutrient Content of the U.S. Food Supply, the new Healthy Eating Index, a new monthly series of briefs. At the same time the Center is updating the research base supporting the Food Guide Pyramid, planning for the next edition of the Dietary Guidelines, and positioning itself to launch a National nutrition promotion campaign stressing the many consumer-oriented benefits of healthy eating to coincide with the release of the next Dietary Guidelines in the Year 2000.

The Nation is now aware that nutrition is the link between diet and health. Four of the leading causes of death in the United States are linked to diet. Heart disease, cancer, stroke, and diabetes account for more than 1.4 million deaths annually, nearly two-thirds of the U.S. total. Diet also plays a role in other health conditions such as overweight, hypertension, and osteoporosis, which can reduce the quality of life and productivity and contribute to premature death. Taken together, these seven diet-related health conditions cost society an estimated \$250 billion each year in medical costs and lost productivity.

Improving the diets of all Americans can reduce early deaths, improve the quality of life and increase market opportunities for new food products and technologies. For example, Americans are currently eating too much saturated fat. Reducing the percentage of calories consumed from saturated fat by 3 percentage points could prevent about 100,000 new cases of coronary heart disease by the year 2005 and save nearly \$13 billion in medical costs and lost earnings.

By providing timely and insightful analysis to decision makers, by forecasting dietary trends, by promoting consumer-oriented nutrition messages, and by working collaboratively with key stakeholders in the food, agriculture and health fields, the Center can continue to leverage its modest resources and help Americans enjoy healthier diets and lives.

Mr. Chairman, this concludes my testimony. I will be happy to answer any questions that you may have.

WIC FARMERS MARKET NUTRITION PROGRAM

Senator COCHRAN. I know that Senator Leahy is a member of the Judiciary Committee, which is meeting as we speak on other is-

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sues, and may have to leave early. I am going to call on him at this point, if our distinguished ranking member has no objection, for any opening statements or questions that he may have.

Senator Leahy.

Senator LEAHY. Well, Mr. Chairman, I appreciate that courtesy. I know how much I enjoyed and have enjoyed working with you on the authorizing committee, both in years when either you have been chairman of various subcommittees and I have been ranking member or I have been chairman and you have been ranking member. We have worked closely together.

I am going to ask a question regarding my strong support of the WIC Farmers Nutrition Program. What this does, for those not aware, is to set up farmers markets that allow WIC families to buy from these farmers markets.

In my own State, that means a lot of them get the most nutritious and fresh food, but it also has the added advantage that if we are spending those WIC dollars, it is going right to people in the area. It has kind of a plus-plus situation with it.

FARMERS MARKET NUTRITION PROGRAM—EXPANSION

The President requested a funding increase, which I support, but I want to make sure that if we add increases, Vermont is going to be in good shape on this. But I want some money to go to States not yet in this program, if they want to.

Will you be able to take steps, if we do get more money, to be sure that this program reaches more States? My wife and I go to a couple farmers markets near where our home is in Vermont.

The chairman has visited that area with me a couple different times. And I just see the tremendous benefit. Every farmer there tells me how helpful it has been.

Will we be able to expand this?

Ms. KEEFFE. Senator, we are very hopeful that we will. In terms of the request that we have made for the Farmers Market Program this year, we foresee that we would be able to expand. We would have a little over \$2 million of that money earmarked for that purpose.

The priorities in the Farmers Market Program are, first, that we are able to meet the current levels of funding in current States that are already in the program.

The second priority is granting expansion requests within those States, and the third level is bringing new States into the program. We feel that with the increase that we have requested, we will be able to meet all of these priorities and will be able to expand.

We have had requests from a half dozen States that are interested in coming into the program. We are very excited by that.

WIC SUPPLEMENTAL FUNDING

Senator LEAHY. Well, I would encourage any States that have the opportunity to do so. I really think it is a win-win situation. The WIC participants are getting used to buying locally produced products, usually fresher, but it is also helping the local economy.

I testified that 400,000 participants may have to be taken off WIC unless the supplemental is approved. What States would be hurt the worst? Which States would be hurt the worst? Do we have

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that kind of a breakdown? And if not, could it be supplied for the record?

Mr. BRALEY. Senator Leahy, we have done our own analysis and we have also asked the States for their plans of how they would likely react to the current level of funding in the WIC Program.

A significant number of States have reported that they will have to reduce their participation below current levels. I believe the number is about nine geographic States.

We have Indian State agencies as well that are reporting the need to reduce their participation by more than 5 percent, some of them well above even a 5-percent reduction.

Those are fairly optimistic scenarios that the States have provided us. We think that because States will not be able to spend every dollar they have this year, that actual participation reductions would be even more severe than reported by the States.

We expect quite a few States would have to make major reductions in participation between now and the end of the year.

Senator LEAHY. Thank you.

ELECTRONIC BENEFITS TRANSFER [EBT]

And how are we doing on EBT?

Ms. KEEFFE. We are very proud of our progress in EBT, Senator. Currently, we have 18 States that have EBT operations. There are eight States where EBT is operating on a statewide basis. Currently, about 15 percent of all total benefits are provided via EBT.

By the end of fiscal 1997, we estimate that 25 States will be operational, and we will be delivering 30 percent of benefits via EBT. It is moving quite rapidly. We expect to attain the goal of being completely EBT operational by the year 2002.

Senator LEAHY. Good. Thank you.

I will put the rest in the record, Mr. Chairman.

Senator COCHRAN. Thank you very much, Senator, for your participation and your leadership in a lot of these nutrition areas. We know of your strong support for many of these programs and assistance and leadership in drafting a lot of the legislation that is funded in this bill.

Senator BUMPERS.

Senator BUMPERS. Mr. Chairman, I only have a couple questions, and I will submit the rest of mine for the record.

FEDERAL TAX REFUND OFFSET PROGRAM [FTROP]

But I guess, Mr. Ludwig, I probably should direct this question to you. You have indicated that the Food Stamp Offset Program has helped recapture, I think you said, \$70 million. Is that correct?

Mr. LUDWIG. It is approximately \$100 million, I believe, sir.

Senator BUMPERS. \$100 million?

Mr. LUDWIG. Yes, sir.

Senator BUMPERS. And 32 States are participating?

Mr. LUDWIG. Let me give you the updated numbers. As of 1996, a total of 40 States participated in the FTROP Program. We have collected in excess of \$100 million to date.

Senator BUMPERS. Why do we not just mandate all the States to do that? It seems to be a very effective collection program.

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Mr. LUDWIG. Yes, sir; we have seen great progress among our States over the last few years. We have the highest expectations that the remaining 10 will be coming on board and implementing FTROP over the next few years. We have not had the authority to mandate it on States, but they are proceeding forward.

Senator BUMPERS. Do we pay the States their administrative expense to operate this program?

Mr. LUDWIG. Yes, sir; we pay it on a 50-percent match.

Senator BUMPERS. Fifty percent of what they collect?

Mr. LUDWIG. No, sir.

Senator BUMPERS. Fifty percent match of the administrative expense.

Mr. LUDWIG. Yes, sir; 50 percent match of their administrative costs.

WIC FUNDING

Senator BUMPERS. On the WIC Program your budget request for 1998 is based on a caseload of 7.4 million, is that correct, Madam Secretary?

Ms. KEEFFE. In 1998 it is based on 7.5 million.

Senator BUMPERS. 7.5 million. What is the present caseload?

Ms. KEEFFE. Well, we are seeing numbers in excess of 7.4 million late last year, October and November figures from last year, which is why we are in the position of requesting the supplemental, because these numbers are higher than what we had estimated fiscal 1997 participation at.

Senator BUMPERS. Now, you are anticipating 7.5 million. We have a \$100 million supplemental coming up. You had \$100 million carryover. Is that not correct?

Ms. KEEFFE. Yes.

Senator BUMPERS. And you could use that without any further legislative authority, can you not, or do you have to have some authority to spend that carryover?

Ms. KEEFFE. No; we can spend it.

Senator BUMPERS. All right. I am just trying to put the numbers together.

Ms. KEEFFE. Sure.

WIC FUNDING INCREASES

Senator BUMPERS. You have a \$100 million carryover, \$100 million supplemental, and you are getting a \$300-plus million increase for 1998. So that totals \$500-plus million more that you will have. No; wait a minute. The supplemental is going to be for 1997, is it not?

Ms. KEEFFE. That is right. The supplemental is 1997.

Senator BUMPERS. And the carryover, too.

Ms. KEEFFE. And the carryover will be—we will not have it until we are into 1998, when, you know, all the finances come through and all the accounting. And the \$300-plus million in 1998 is not all total increase; \$100 million of that is a contingency fund that would only be used if food cost increases of an amount where we need to reach into that pot of money.

So that is just aside. If that, you know, were to happen, then that money can be used for food money for inflation.

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And, really, we are only talking about \$30 million of that money that is new, increased money for increased participation, if you will. The rest will take care of inflation.

Senator BUMPERS. Do you feel comfortable with your request for 1998, that that will be adequate?

Ms. KEEFFE. Yes; we do.

Senator BUMPERS. For 7.5 million?

Ms. KEEFFE. For 7.5 million. But we need the supplemental for where we are in fiscal 1997 to keep that growth in place. Otherwise we are going to drop behind.

WIC ELIGIBLES

Senator BUMPERS. What percentage of the total people who would be eligible for WIC if they applied, what percentage of 7.5 million of that—let me restate it.

If everybody in the country applied for WIC that would be eligible for it, how many would that be? What do you think the total pool is?

Ms. KEEFFE. Well, the eligible, the income eligible, population, we estimate at 11.4 million. And then the fully eligible, which means income eligible and nutritionally at risk, is 9.2 million.

Senator BUMPERS. Do you have any outreach programs to reach those people that are not on the program that would be eligible?

Ms. KEEFFE. Oh, yes; there has been a lot of outreach taking place which is why the program has successfully grown over the years. We estimate that 80-percent of those fully eligible would naturally participate. The 7.5 million figure is 82 percent of those fully eligible.

WIC IMMUNIZATION

Senator BUMPERS. Madame Secretary, I recently spoke to all the WIC directors who were in town. And following their convention, they met with CDC in a 1- or 2-day meeting. And I had tried to facilitate that meeting for some time to see if we could not get the immunization levels up through the WIC Program.

And I did not get any feedback for how well that meeting went. That has been a couple months ago, I guess. But the WIC directors that I have talked to are always anxious to participate and help out with the immunization program.

Did you happen to attend that meeting?

Ms. KEEFFE. I did, Senator. I had the pleasure of being there for the opening. It was really wonderful, because not only were there representatives of the WIC directors and CDC, but also the Association of State and Territorial Health Officials.

It was a wonderful opportunity to share experiences and success stories of what some States had been doing that were best practices and to be able to share those practices with others.

The support we have had from CDC in recent years to make money available to build data system infrastructure to track infant immunization in the WIC Program has been very helpful. WIC stands in the forefront of aggressively being part of child immunization, especially the very early years. This is something that, since I have come to the Food and Consumer Service I have been personally very involved with. I have also had the pleasure of working

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with Mrs. Bumpers and Mrs. Carter to see other areas in our programs where we could be helpful in promoting immunization, which, of course, is vitally important to young children.

PREPARED STATEMENT

Senator BUMPERS. Thank you very much, Ms Keeffe.

Ms. KEEFFE. Thank you.

Senator BUMPERS. Thank you, Mr. Chairman.

[The statement follows:]

PREPARED STATEMENT OF SENATOR BUMPERS

I want to join my colleague, Senator Cochran, in welcoming before this subcommittee representatives of the United States Department of Agriculture. The subject today is a review of the budget request for USDA's Food and Consumer Service. The Food and Consumer Service has the responsibility of not only ensuring adequate diets for the most vulnerable of our people, but also increasing the public awareness and encouragement to improve the diets and nutrition-related health of our entire society.

Not only are these programs of special importance to the American people, they also represent a substantial portion of funding under the jurisdiction of this subcommittee. Of the total in new budget authority for all USDA programs funded by this subcommittee, those of the Food and Consumer Service represent \$39.8 billion, or 78.3. If you include additional amounts included in the legislative proposals to come before Congress, the Food and Consumer Service request increases to \$40.6 billion, or 79.3 percent of the USDA request before us.

In spite of the high proportion of subcommittee funding for nutrition programs, the amount requested is below what it might have been but for a couple of reasons. One is that fewer Americans are relying on Food Stamps and similar programs due to a continually improved economy. In March 1994 program participation levels reached an historic level of 28 million persons. Today, that figure has improved to a level of 24 million persons.

Another factor relating to the lower budget request is the passage last year of The Personal Responsibility and Work Opportunity Reconciliation Act of 1996, commonly referred to as Welfare Reform. I look forward to the testimony of today's witnesses on the effect Welfare Reform is having on their programs and their thoughts on legislative proposals to modify certain parts of that law.

In addition to the budget requests for fiscal year 1998, this subcommittee also is faced with a request for fiscal year 1997 supplemental funding for programs of the Food and Consumer Service. One supplemental item is funding for the Nutrition Education and Training Program. This program was previously included as mandatory spending in the Child Nutrition account, but Welfare Reform converted this program to discretionary spending. Since Welfare Reform passed subsequent to the fiscal year 1997 Appropriations Act, the sequence of events resulted in a shortfall for this program. I understand this request is fully offset by mandatory spending in The Emergency Food Assistance Program.

One other supplemental item is a request of \$100 million for the WIC program. Because of the importance of this program and the complexity of its allocation system, I would like to provide for the record an overview of why the supplemental request is before us.

WIC is, and has been, one of the most successful and popular programs within the federal government. While there has been differing opinions on funding levels for various USDA programs, support for the WIC program has always been unanimous. Not only does the program serve a most important constituency, women, infants, and children, it is also proven to be cost-effective. USDA documentation has established that for every \$1 spent on the WIC program, \$3 in Medicaid spending is saved during the first 60 days after an infant's birth.

For many years now, the bipartisan goal for the WIC program has been to achieve full funding in order that all eligible participants who wish to apply, may receive assistance. USDA has projected full funding will occur when participation levels can reach 7.5 million. I am pleased to say we are clearly in sight of that goal and the budget request before us will get us there.

Due in part to the rapid growth of the WIC program, in the range of 500,000 new participants a year, and the complexity of program delivery, there has been an historic amount of funding remaining unspent in one fiscal year yet available in the following year. This is the so-called WIC carryover.

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For reasons not entirely clear, the growth that was expected for fiscal year 1995 did not fully occur. That year, caseload was expected to reach 7.3 million participants but, in fact, it only reached 7.0 million. The result was a large increase in the carryover and a question about the accuracy of future caseload projections. In turn, USDA and OMB deemed it prudent to provide more conservative estimates for program growth and therefore projected growth in fiscal year 1996 would reach a year-end figure of 7.3 million, the same level they had predicted for the previous year.

Going into fiscal year 1997, USDA and OMB concluded that the funding level provided by this subcommittee would not allow for program growth, but it would be adequate to meet level participation needs. However, that projection has proved incorrect for a number of reasons.

First of all, the rate of program growth resumed its pre-fiscal year 1995 levels. Rather than a year-end level of 7.3 million, caseload in fiscal year 1996 reached 7.4 million. In addition, WIC-related food prices increased 1.1 percent above the budget forecast. As a result of these two factors, the carryover available for obligation in fiscal year 1997 is substantially below earlier assumptions.

By including the carryover from fiscal year 1996 with the amount this subcommittee provided in fiscal year 1997, it is now estimated that there is funding to support average participation this year of slightly more than 7.2 million, 200,000 participants below the level achieved by the end of fiscal year 1996. Since fiscal year 1997 started out at a level of 7.4 million participants, USDA has concluded that without supplemental funding, they will have to reduce caseload to 7.0 million in order to maintain an average of 7.2 million. As a consequence, some states are now preceding with plans to reduce current caseload, an effort directly counter to the long-held, bipartisan goal of achieving full participation.

In spite of the reduction in carryover in WIC funds described above, there is still a substantial sum of fiscal year 1996 dollars that were unspent at the beginning of this fiscal year. Because of the obvious irony of asking for a supplemental at a time when carryovers occur, I believe it is important to enter into the record an overview of how and why these carryovers occur.

Funds appropriated for the WIC program are available for expenditures for two fiscal years. Due to a number of factors, USDA and State WIC agencies do not know at the exact end of any given fiscal year exactly how many dollars were spent. In fact, State WIC agencies will not know these total amounts until a few months after the end of the fiscal year.

One of the reasons for this delay is that many of the WIC vouchers issued late in the year by state agencies are not redeemed and reflected back through the accounting system until the fiscal year is over.

It is further possible that all WIC recipients will not use all WIC vouchers issued. It is not until after October 1 that all vouchers issued in August and September are fully accounted for.

Another variable is the exact cost of the vouchers. The cost of a particular voucher equals the price of the food item purchased by a WIC participant on the day of the purchase. State agencies have no way of knowing what that purchase price will be until after the vouchers are redeemed and returned.

Another major item that controls WIC expenditures is the cost containment aspect of the program as required by law. Cost containment has been a very successful tool at reducing program costs and are estimated to save approximately \$1.1 billion annually. The cost containment contracts also add, however, to the difficulty of expending all available funds. A State generally cannot bill a manufacturer for rebates for infant formula sold in September until after September is over and the fiscal year has ended. A State may receive a check from an infant formula company early in a fiscal year that represents rebates for formula sold to WIC participants in the latter months of the previous fiscal year. Such checks are considered funding for the prior fiscal year. To the extent that such checks are not freely used to defray WIC expense incurred in the previous fiscal year, the remainder of the checks constitutes money classified as carryover money from the previous fiscal year.

We must also remember that because State WIC directors do not know exactly how much will be spent in any given year, they exercise prudent caution in order not to overspend their state's allocation. It is not uncommon for a state to withhold some of its allocation at the end of the year to avoid the possibility of overspending. This should not be viewed as an overly conservative practice, but rather a tool of sound program management.

If all states average expenditures of only 97 percent of their annual allocations, the total of carryover would equal \$120 million. As a guiding principle, USDA, State WIC directors, and the Congress should recognize approximately \$100 million as a reasonable and expected carryover amount. This amount is often referred to as

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“structural carryover”. While it might be confusing to some who question a supplemental request when there exists any carryover at all, it should be noted that a “structural carryover” is a recognized an inherent feature of program operations.

However, with or without the “structural” portion of the carryover, we now find ourselves in the position that the carryover currently available for obligation this fiscal year is below earlier projections. When you factor in increased food costs, which are provided in the Department’s Explanatory Notes, along with the reduced carryover from fiscal year 1996 we are, for the first time in about 15 years, faced with allocations to the states at a level insufficient to meet previous year participation for many states.

I would also like to mention this supplemental request in the context of the request for WIC funding in fiscal year 1998. In order to attain the goal of full funding for WIC, a participation level of 7.5 million women, infants, and children, the budget asks for an increase of \$378 million. \$100 million of that amount is reflected in the \$100 million supplemental request. In other words, the fiscal year 1998 increase totals \$378 million from the fiscal year 1997 level without a supplemental.

Also, the \$378 million increase includes another \$100 million to be held in reserve in the event of future unforeseen program expenses and to avoid the need for additional supplementals. In addition, the increase also includes amounts necessary to respond to food cost inflation and to recapture the fiscal year 1996 carryover reductions explained above. This leaves only a \$25 to \$30 million increase for actual program expansion. This is the amount necessary to bring the program participation from 7.4 million up to 7.5 million, which is full participation.

I hope that this explanation helps answer questions some may have about why the supplemental is needed, why there is a carryover, and how the supplemental request ties in with the request for fiscal year 1998. I offer it in full recognition of the budget constraints before this subcommittee. I honestly believe that every member of this subcommittee is fully committed to the goal of full funding for WIC, but I am a realist and I know finding offsets will be difficult if the budget process does not allow us to use the offsets identified in the President’s budget request.

In closing, I want to commend our guests for their fine and noble work. I often hear from farmers who complain that our appropriations bill has too little to do with real farming. When you look at the amount of spending in our bill for food assistance programs, you know what those farmers are talking about but you have to ask why they are saying it. Domestic feeding programs mean that more of the farmers products are getting to people who need them. Improved nutrition information means consumers can make better choices and farmers can better plan for improved markets. As long as there is hunger in America, no one can dispute the purpose of your mission.

I know there are many other important programs within the Food and Consumer Service that I will not take time here to touch on. I do note, however, the funding request for the Food Program Administration. I agree that your responsibility for \$40 billion in program activity is evidence enough for your need to retain adequate staff levels. Recent action to crack down on fraud and trafficking are probably signals that there is much more to be done. For these reasons, and others, we need to fully consider your requests for staff needs as well as your ability to conduct research on the changing nature of nutrition programs. In this way, we may better understand the changes effected by Welfare Reform and the economy generally and the implication of those changes on your programs. I hope this subcommittee can be helpful in giving you the tools necessary to do all these things.

WIC PARTICIPATION AND SUPPLEMENTAL FUNDING

Senator COCHRAN. Thank you, Senator Bumpers, for your contribution to this hearing.

I am also interested in this supplemental request. I think we need to go ahead and try to get as much information as we can, so we can make a decision about the supplemental.

While there are excess funds in some of the accounts because of changes in welfare reform, this is an account which you indicate we are going to have a shortfall. And, I am still a bit confused about the supplemental.

Are we trying to maintain the current level of participation, or is this designed to increase the level of participation to keep expanding the program?

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Ms. KEEFFE. The supplemental, Mr. Chairman, is to maintain participation at the current level. Without those funds, we feel that States will have to reduce caseload by approximately 400,000 persons by fiscal year end in order to get to that 7.2 number.

Senator COCHRAN. Senator Leahy asked you about the State-by-State analysis, if you had information about where the dropoffs from the program would occur. Is there a way to determine how many participants you would lose in each State?

Ms. KEEFFE. Let me just give a short answer, and I will have Mr. Braley elaborate. I do not think we know precisely. States are very well intentioned and feel that they are going to be able to spend all the money that they have in their accounts.

WIC STATE PLANS

But we certainly have to look at what the record and history teach us in the program, and how this program operates. We feel by necessity they end up with a carryover at the end of each fiscal year. I think this is very understandable.

But for them to take a position that, well, this year we are not going to have that carryover, we are going to be able to spend down every cent, I do not think is very realistic.

Mr. BRALEY. Mr. Chairman, to elaborate a little bit on the Under Secretary's point, historically States have carried over in the last 3 years between 3.5 and 4 percent of the funds that have been appropriated to them.

The submitted plans indicate that they would reduce carryover to less than 1 percent, about seven-tenths of 1 percent. That is unprecedented even in years when dollars have been tight, as they are this year. We believe that about as low as they could get would be about 2.5 percent of the total grant.

The reason is that there are a lot of uncertainties. As for example, States issue vouchers in the WIC Program toward the end of the fiscal year, it is not until the next year that those vouchers are redeemed and they actually know what their obligations are.

Similarly, States have rebate contracts with infant formula companies, and they do not receive the proceeds from those contracts until the next year.

The consequences of overspending are severe for a State, so they tend to underspend slightly, even though in their planning at this time of year they typically say, well, sure, I can spend everything that is available.

We have taken the carryover amounts that we expect to carry from last year into this year, which were about \$145 million, and, recognizing that funding is tight this year, reduced that to about \$100 million, about a 30-percent reduction.

WIC PARTICIPATION

Even with that drawdown, we believe States can serve only an average of 7.2 million participants this year. Therefore, by the end of the year, because States started way above that figure, they are going to have to come down to about 7 million participants, unless the supplemental funding is provided.

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The reason for the supplemental is to maintain participation levels that were achieved at the end of fiscal year 1996 and the beginning of fiscal year 1997.

In the reports we have just received, nine States reported a participation reduction in excess of 5 percent, even if they anticipated spending the full amount of the resources available. I can either read those now or provide them for the record.

Senator COCHRAN. I think providing them for the record will be helpful to us, and will give us a chance to review them and try to make a determination about the response the subcommittee ought to make.

[The information follows:]

WIC: States with estimated participation decreases greater than 5 percent: Minnesota, New Mexico, Arkansas, Massachusetts, Nebraska, Louisiana, West Virginia, Alabama, and Hawaii.

FUNDING SOURCES

Senator COCHRAN. Is there a suggestion as to where the additional funds should come from. In this budget process here, when we add funds over and above what we are allowed, we have to take it from some other accounts. What is the recommendation of the administration as to where we take this money from?

Mr. BRALEY. My understanding is—and maybe Mr. Kaplan can correct me, if I am wrong on this—one-half of the offset was from Public Law 480 programs within the Department of Agriculture, and the other one-half was elsewhere in Government, but not specified. There was an offset for all of the supplementals that were planned Governmentwide. So one-half of it is within the Department, and the other one-half is in a more general category.

Senator COCHRAN. Mr. Kaplan, is that the way you did it?

Mr. KAPLAN. Yes, sir.

Senator COCHRAN. Well, I am curious about that. Because, for example, I notice in the food stamp budget proposal here there are proposed changes in the law that would result in more appropriated dollars for the Food Stamp Program than if we do not change the law as recommended. That is, if the authorizing committee does not change the law—that is not the responsibility of the Appropriations Committee.

But, if the authorizing committee does change the law to add benefits under the Food Stamp Program, as I understand the budget process, it will have to make other changes in the law in some other area to offset the additional cost of those benefits.

Is there in the budget submission any suggestion as to what changes in the law ought to be made by the Agriculture Committee to reduce the cost of the programs under its jurisdiction at the same time you are asking it to change the law to increase the cost of the Food Stamp Program.

Mr. KAPLAN. No, sir; just the increases that are in the President's budget.

Senator COCHRAN. OK. Well, it is an interesting exercise, is it not, that you can submit a budget, if you are the administration, and presume these changes to increase spending and make people happier. To tell people that they are going to get more money from the Federal Government, but not tell them the other side of the

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coin, which is that if these changes really are made under existing law, there are going to have to be changes in other programs to pay for them.

But you do not want to tell the beneficiaries of those other programs that they are going to get less, because you are going to take those funds and give them to food stamp beneficiaries who will be given new benefits.

Ms. KEEFFE. Mr. Chairman, I think it is fair to say in this discussion that the President is committed to a balanced budget. The changes that he has recommended in the Food Stamp Program are part of his balanced budget submission.

Senator COCHRAN. I understand that he has talked about the fact that the budget is a balanced budget, but no one agrees with him who is keeping the score, at least no one who understands the trigger that calls for all the big cuts to come in the last couple of years of the budget cycle and the tax increases that would be required to be imposed to balance the budget.

If you just look at the changes in programs, the changes in obligations of the Federal Government, it does not come out that way. Only the automatic, so-called trigger, makes it a balanced budget. I think that is an appropriate summary description of the budget that has been submitted by the President.

I am trying not to get into the macroanalysis of the budget, as they are doing on the Budget Committee. I would rather let Pete Domenici discuss that with Mr. Raines or others.

What we are interested in is what we have to do on this subcommittee and what the Agriculture Committee has to do with respect to proposed changes in the law. It just seems that the requests that we have gotten are to increase spending for programs that are very popular with the beneficiaries, but we never tell anybody that if you do that, you must cut spending somewhere else.

CHANGES IN THE FOOD STAMP PROGRAM

I was just curious if you had any suggestions specifically about what programs to cut. The changes that you are contemplating in the food stamp area I understand relate to work requirements and to those who might be terminated who now are getting benefits because of immigrant status.

Are those the main changes that are requested in the Food Stamp Program?

Ms. KEEFFE. Well, there are several areas, Mr. Chairman. I am going to ask Ms. Jackson to go into greater detail.

Ms. JACKSON. Mr. Chairman, you are correct that one of the major changes is a change to basically change the work requirement for able-bodied adults between the ages of 18 to 50, to try and create what the administration feels is a real work requirement by increasing work opportunities through increased employment and training funding for States; by changing the time limit from 3 and 36 months that a person could receive benefits without working to 6 and 12 months; also by strengthening the penalties against individuals who refuse to work; and by also giving States more flexibility to use the food stamp benefit as a wage subsidy to encourage more private employment.

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In addition to that proposal, there are also proposals to eliminate the excess shelter deduction cap by the year 2002, to help families with children who have heavy housing and heating expenses. There is also a proposal to resume indexing the standard deduction by the year 2002 to prevent further decline of the actual value of this deduction.

There is also a proposal to raise and index the vehicle fair market value exclusion, recognizing that in order for people to work, they have to have reliable transportation.

So all of these are included in the proposal.

The one area relating to legal immigrants is a proposal for the 1997 budget. We propose to postpone the implementation of the restrictions for legal immigrants from the August 22 deadline, which is currently set in law, to September 30.

The idea there is to give individuals who are already applying for citizenship more time to become naturalized. But there is no proposal for legal immigrants and food stamps beyond 1997.

FOOD STAMP ERROR RATES AND PAYMENT ACCURACY

Senator COCHRAN. There is a statement in your submission about the error rates and the fact that you have made some progress in working with States to improve payment accuracy. Could you tell us how you are working to deal with this problem, and what are the reasons for this success in bringing the error rate down?

Ms. JACKSON. Well, we were very concerned, Mr. Chairman, that during fiscal years 1992 and 1993 the national error rate increased in the Food Stamp Program. We instituted some partnership programs with States and, through our regional offices, targeted States with very high error rates.

We also sponsored a national payment accuracy conference to try to raise the consciousness level, particularly of top management in States, about the need to focus on payment accuracy.

We were given additional funding to provide State Exchange money to States. This funds transportation for them to travel to other States that had been very successful in reducing their error rates, to see firsthand what types of initiatives and programs they established.

All of these various activities have been very successful in allowing us to reduce the payment error rate. The high rate that we had in the program was in fiscal year 1993, where the error rate went all the way up to 10.81 percent. That is both underpayments as well as overpayments.

We were able to reduce that error rate down to 10.32 percent in fiscal year 1994 and then 9.72 percent in fiscal year 1995. Those reductions over those 2 years, from 1993 to 1994 and then again from 1994 to 1995, resulted in savings to the American taxpayer of over \$350 million.

We are pleased that early results from the 1996 data show that we are still in that downward trend.

Senator COCHRAN. Well, that is good news. I had heard about that and wanted to bring it out and urge you to continue to use your good judgment and imagination on how to deal with that.

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Ms. KEEFFE. Mr. Chairman, this is an area, that really exemplifies the Federal Government and the States working cooperatively to achieve this positive story. We were the impetus behind this, and we did have this funding earmarked to move aggressively in this area, but it is really the States that have turned this around. I think it is a very positive story.

FOOD STAMP PROGRAM CONTINGENCY RESERVE

Senator COCHRAN. As a result of welfare reform, there is a suggested new importance for the Food Stamp contingency reserve. Your statement indicates that \$2.5 billion is requested for a contingency reserve.

Could you tell us if you have done any assessment on how the program funding requirements might fluctuate, given the choices States make concerning the level and form of benefits provided and waivers requested under welfare reform?

Ms. KEEFFE. Well, I think that one of the rationales for requesting the contingency is welfare reform and its uncertainties. The amount we requested really is not too large. It translates into 6 weeks' worth of Food Stamp benefits.

Another reason for the contingency fund is the situation we are in right now. It does not have anything to do with welfare reform, but disaster flooding and emergency food stamp issuance. This is an area where the contingency is also very helpful. We have been faced with a number of serious disasters in recent years, and it is helpful to have contingency funding. The combination of potential disasters, coupled with the uncertainties of welfare reform, made us think that this was not an outlandish amount to request.

Senator COCHRAN. Well, in 1997 we had a \$100 million contingency reserve. Will that \$100 million be needed?

Mr. BRALEY. Mr. Chairman, we do not anticipate needing it. I know you have been with this committee for a number of years, and it was not too many years ago that we consistently needed food stamp supplementals.

We started requesting the contingency reserve because it is difficult to predict exactly how much the Food Stamp Program is going to cost.

Especially with welfare reform this year, we thought it was particularly critical to have a significant contingency reserve in case some of the estimates are wrong or in case some things happen in the economy that would cause that to happen.

It is a year of a lot of change and uncertainty. The reserve is even more important than it has been in the last several years, from our perspective.

DISASTER ASSISTANCE IN THE FOOD STAMP PROGRAM

Senator COCHRAN. What is the outlook, if you know, about the natural disaster impact on food stamp dollars in fiscal year 1997?

Mr. BRALEY. Mr. Chairman, we are just really getting disaster efforts underway in States, so it is a little early to tell. Mr. Ludwig may want to comment further on that.

Mr. LUDWIG. Mr. Chairman, we are early in the year, but I will speak about what we have going right now. Then I will talk briefly about what we have had in previous years.

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As of this morning, I have authorized emergency food stamps for 12 counties in the State of Arkansas.

Now, those are not entire counties, but are segments of the counties that actually had destruction. We approved four counties in Arkansas Saturday morning, and the additional eight last night. So we do have 12 counties there.

I am expecting to receive requests from both Ohio and Indiana. We do not know, since we have not received the request, exactly how many counties are going to be affected. One of the problems with a flood, as it all moves south and downstream, is that there is more flooding.

Until an area is actually cleared of the water, it is hard to determine what portions of counties were affected. We are expecting the aforementioned two States to come forward.

On more of a global basis, and speaking from last year's history, we have not moved yet into hurricane season. Last year we had an unprecedented number of hurricanes on the east coast. We are also looking at additional flooding due to the vast amounts of snow that fell throughout the Midwest.

So in the long-term projections, between the snow and the hurricanes, we believe we will have quite a year for disasters. The last 2 years we have had a significant number.

NATURAL DISASTER SPENDING IN THE FOOD STAMP PROGRAM

Senator COCHRAN. Do you know how much funding in each of the last 2 years has been required in the Food Stamp Program as a result of natural disasters?

Mr. LUDWIG. I can get that number for you. We have it.
[The information follows:]

In fiscal year 1995, the Food Stamp Program spent zero money on disaster response. In fiscal year 1996, the Food Stamp Program issued \$64,888,920 worth of benefits responding to three disasters: Hurricane Marilyn in the Virgin Islands, the floods in the Pacific Northwest, and Hurricane Fran in North Carolina.

Senator COCHRAN. Yes; that would be good to just have in the record what we spent in 1996 and in 1995. I know in 1997, we have had these tornadoes and floods already. We have read about and seen broadcast reports of the damages and the terrible problems that victims have had in coping with those disasters.

I know in my State I think nine counties have now been designated eligible for some form of Federal disaster assistance. I do not know whether the food stamp benefits are included in that or not.

But if they are, we certainly do not want to turn around and find out we do not have the money to make those available and we have to rush through a supplemental, and maybe the Congress will be out on a recess or whatever.

I do not want to run into a situation where we do not have the funds to respond quickly to these emergency situations. That is why I am asking these questions about the contingency reserve.

You know, one thing I do remember, Mr. Braley, and I know you do as well, the tendency of some who are in leadership positions on Appropriations to intentionally underestimate in the annual appropriations bill funds that would be needed for mandatory pro-

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grams to build in the necessity for a supplemental. It was just part of the process in years past.

That is probably not a good budget practice and we would be criticized today if it were done. But who knows what these costs are going to be. They are estimates, as we are all acknowledging here.

We do not know what the natural disasters are going to cause in terms of outlay responsibilities for food stamps. And there are many other areas in this part of the appropriations bill where we are just not able to exactly predict what the needs are going to be.

I think the submission, insofar as you can do it, is straightforward and we appreciate that very much. And we commit to you that we will endeavor to work with you to help satisfy these needs that we have under the law.

Many of these are mandatory programs. We do not have a choice about making the payments available. If people are entitled to benefits under the law, we must fund the benefits that they are entitled to. So this committee is going to cooperate with the administration in that regard.

WELFARE REFORM AND THE CONTINGENCY RESERVE

Let me ask you one other question about the contingency reserve. Does the fiscal year 1998 request rely solely on the contingency reserve to accommodate any increased cost resulting from the choices States might make under welfare reform?

Ms. KEEFFE. That certainly was something that we were trying to anticipate in making that request. The \$2.5 billion benefit reserve is about 10 percent of the total food stamp money.

Our most basic assumption is a continued good economy. There is no reason to think otherwise. We cannot assume how States are going to react in regards to TANF and that part of welfare reform which would then trigger changes in food stamps.

With those questions, we came up with the basis for our request.

ELECTRONIC BENEFITS TRANSFER AND FRAUD REDUCTION

Senator COCHRAN. In connection with the electronic benefits transfer, I know Senator Leahy asked you how that was going.

In your prepared statement, Mr. Ludwig, you mentioned that eight States now have these systems in place for the delivery of food stamp benefits. Ten others have already implemented the system, and every other State is in the process of planning for or implementing the system. Do you have any feedback yet on the extent to which these systems are working to improve efficiency and to reduce fraud?

Mr. LUDWIG. Yes, sir; we do have some preliminary results on those issues. Three years ago, internally we began a major initiative to get States to implement EBT. As we stated earlier, today we have 18 States in pilot status. In excess of 40 States are in some type of major development process right now.

EBT does not eliminate fraud. But it gives us the ability to track individuals or retailers that are committing fraud. With the paper coupon, we do not have any processes to know where those coupons go and how they ultimately get to the street.

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With EBT we have an electronic tracking system that shows when benefits are redeemed, where they are redeemed, and for what amounts they are redeemed.

We are in the process of piloting a new software program, ALERT, that statistically gives us the results of individual stores with probabilities of which stores are trafficking. The system targets stores based on the store size in comparison to other stores in similar situations and their redeeming processes, so that we can decide from our compliance standpoint and from the OIG standpoint, which stores we should visit.

So yes, we are getting positive feedback. Two years ago, we had 225,000 stores redeeming food stamp benefits. Today we are down to approximately 196,000 stores. We think there is a combination of reasons for that, EBT being one and our stepped-up compliance efforts another.

EBT: SAVINGS AND COSTS

Senator COCHRAN. There is an indication in your request that there is a reduction in the cost of printing and shipping and processing stamps as a result of the development of the electronic benefit alternative. What is the potential savings in this area when all States have implemented their EBT systems?

Ms. JACKSON. Right now the total cost in printing and distribution is \$49 million. So we would be able to realize, once all States are operational, almost that entire amount in savings in terms of the current printing contract and all of the related expenses in distributing the coupons.

Senator COCHRAN. What level of funding, if any, is included in the request for this next year for work on the electronic benefits transfer of Food Stamps? Are there Federal costs associated with expanding this program and putting it on line in every State?

Ms. JACKSON. We are matching State costs at a 50-percent match rate. So for every dollar spent by a State, we are matching that with a dollar in Federal funds to encourage the expansion of EBT.

REGULATION E

Basically in the past, the biggest complaint that we heard from States as to why they were moving slowly in implementing EBT was because they were fearful of potential increased costs of regulation E. Welfare reform legislation basically eliminated regulation E from State EBT systems. So those increased costs that States were concerned about no longer exist.

So we think that States are going to continue to move very rapidly. And as I said, we are matching their administrative expenses at a 50-percent match rate.

Senator COCHRAN. What is regulation E?

Ms. JACKSON. Regulation E regulates how debit and credit cards work today. If you take, for example, an ATM card and lose it, as long as you report the loss within 48 hours, you are not liable for any more than the first \$50 of loss. That also applies for most consumer credit cards today.

The Federal Reserve Board once had ruled that regulation E would also apply to EBT cards. That was a huge concern for States because of the fear that fraud and abuse would basically dramati-

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cally increase State costs. Those costs would be carried by the card issuer, and, in this case it would have been State governments.

Welfare reform legislation ruled that State EBT systems were not subject to regulation E. Therefore, the potential increased costs that concerned States are no longer an issue. We feel that was one of the last remaining big barriers to EBT implementation.

Senator COCHRAN. Who bears the loss, if there are losses?

Ms. JACKSON. Right now, because of the legislation, basically the cards will work the way food coupons work today. The recipient is responsible.

However, there are more protections with EBT than with the food coupons. Right now if a recipient loses his or her coupons, except for extenuating circumstances, such as a disaster, they are not replaceable. They are treated like cash.

The EBT card, however, is protected because it has to be used in conjunction with a personal identification number. As long as a person does not do something foolish, like write that PIN number on the card—and they are specifically instructed not to do that—a lost EBT card basically should be nonuseable as long as the person has not publicized their personal identification number.

So that is the added protection that the EBT system provides to our customers. It is far more secure against theft and loss than coupons.

WIC FUNDING REQUEST

Senator COCHRAN. The WIC supplemental funding request of \$100 million we have discussed. I think we ought to fully understand the estimated shortfall. If I understood what you said, we would lose 400,000 program participants if we did not approve the \$100 million supplemental, is that correct?

Ms. KEEFFE. Yes; that is our assumption based on the numbers.

Senator COCHRAN. Because I had heard another number from Mr. Braley on some subject, but that was not this number dropoff.

Mr. BRALEY. No; the reduction that we expect to experience would be about 400,000, from about 7.4 million down to 7 million participants.

Senator COCHRAN. OK. I have some other questions on the WIC request. I understand \$4.108 billion is the total request for the full 1998 fiscal year, which represents an increase of \$378 million over fiscal year 1997, and, I understand from your testimony, that would achieve full funding of the WIC Program by the end of the fiscal year—some 7.5 million participants.

Ms. KEEFFE. That is correct.

Senator COCHRAN. And that includes the increased participation, as well as a \$100 million contingency fund if food costs exceed budget estimates.

Ms. KEEFFE. Yes.

Senator COCHRAN. As you know, WIC is a popular program. I expect that we will do everything possible to try to ensure that there is full funding.

WIC EFFECTIVENESS

There is no question about the efficacy in terms of health cost savings and improved learning capacity and just general well-being

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that is a cost savings in other programs, as a result of the WIC Program.

I think our hearings have clearly established that over time. The access to clinics and the immunizations, which many times are administered at or near the WIC clinic sites, are very, very important in the overall health of the population that is served by the program.

Ms. KEEFFE. Well, you have stated it very well, Mr. Chairman. Of course, we are deeply appreciative of your support in the past, as well as that from the entire committee. I think everyone has recognized what we say—in short, WIC works. It is a wonderful program.

We have research that demonstrates its success. It is also a program that has been managed effectively over the years. It has received high marks in that regard.

So we are very close to our goal. We really are hopeful that we will be able to have the supplemental for 1997, as well as the funding request for fiscal year 1998.

WIC ELIGIBILITY STANDARDS

Senator COCHRAN. I know it is very subjective to make the determinations that are necessary to establish eligibility for participation. There is just no exact science in place to measure against any set of standards to determine nutritional risk, for example, which is part of the process to determine eligibility.

Are you satisfied that the guidelines are sufficient and the practices are to the point where you can say that there is little or no abuse of this program in falsifying things like nutritional risk or just making subjective judgments that are not based on facts?

Ms. KEEFFE. Well, this is an area that we are continuing to investigate. We would like to see more intra-State uniformity in regard to the nutrition eligibility standards. Our Office of Analysis and Evaluation is planning a report on this.

We have also been working with the National Academy of Sciences that also has researched this area. We are not entirely comfortable that there is not much uniformity.

We do not know of any instances of terrible abuse; however, we are trying rather aggressively to establish more uniformity.

WIC COST CONTROL

Senator COCHRAN. In our State of Mississippi, John Barr has been one of the leaders in the Nation at State administrators' organizations and in developing new ways of keeping costs down and administrative overhead under control.

I wonder why we continue to see nationwide though, administrative expenses that are a high percentage of the total, or the average, cost of the WIC food package. I understand that it is now about 26 percent. Is that high or low? Should we be happy with this? It seems to me that that is too high.

Mr. BRALEY. Well, Mr. Chairman, those costs include traditional administrative costs comparable to those in other programs like food stamps, and a lot of nutrition services and referrals to other health programs, provisions of nutrition education, and a whole host of activities under the nutrition services and administrative

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grant heading. So, to call those funds strictly administrative understates what is really provided by those funds.

The other thing that has happened is the tremendous success we have had in reducing food package costs through infant formula rebates. We have realized a \$1.1 billion influx or recycling of funds in the WIC Program through these rebates.

That has had the effect of lowering the cost of food per person, which makes the percent of dollars spent on nutrition services and administration go up compared to funds spent on food.

So it is certainly an area that we continue to look at and work with States. The States would indicate that they are doing a lot with those resources and that the program is not overfunded.

WIC FUNDING FORMULA AND PARTICIPATION

Senator COCHRAN. There is a request in your budget that the bill include language, our appropriations bill include language, authorizing the Secretary to adjust allocations to the States to reflect food funds spent forward and to make other funding formula revisions.

I am, quite frankly, reluctant to recommend that the committee do that without knowing what the practical results will be. Do you have any notion now as to who the winners and losers would be under such a formula change?

Mr. BRALEY. Well, Mr. Chairman, I think there are two goals that we want to achieve. If we had a supplemental for this year, we want to mitigate the effects in caseload in those States which would have to make dramatic reductions so that high-priority participants are not forced off the program.

In 1998, I think the emphasis shifts from that approach to also recognizing that some States have had an opportunity to grow and reach a fairly good saturation level in terms of serving the eligibles in their State.

We would like some flexibility to try to target some of the States that have lower than average participation rates but still protecting existing participation levels in other States.

That is a little bit of a roundabout answer, and I cannot give you the specific States that would be winners and losers under that, because it would be something we would have to judge based on what has happened up to that point in particular States with regard to how much money they have used and how many participants they have served.

We feel we do need some flexibility outside of the existing funding formula to minimize the adverse effects in some States and also make sure that other States have an opportunity to grow and reach full potential.

WIC PARTICIPATION RATES

Senator COCHRAN. As a matter of curiosity, do you have any notion as to which States are those States that you describe as having a lower rate of participation than others? Could I guess Idaho, Utah, North and South Dakota?

Mr. BRALEY. We do have information in terms of the estimates of eligibles in each State and what percentage of those eligibles are served in the current program.

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I think some of the Western States do have less participation among eligibles than some of the Eastern States. But there is quite a bit of variation. We could certainly provide that information for the record on a State-by-State basis.

Senator COCHRAN. That would be good to have, just as a matter of curiosity.

Mr. BRALEY. Yes, sir.

[The information follows:]

RATES OF PARTICIPATION (BY STATE) AMONG WIC ELIGIBLES

The Food and Consumer Service (FCS) annually estimates the number of women, infants and children who are both income-eligible for WIC and at nutritional risk at the National level. National participation rates are then calculated relative to this estimate of the fully-eligible population.

FCS also develops estimates of the number of infants and children who are income-eligible for the program by State. These estimates, which are provided annually to the States, are produced primarily for use in the WIC funding formula to determine each State's share of the National estimated income-eligible population. Estimates of income-eligible pregnant, post partum and breastfeeding are typically not developed for use in the funding formula. Because women are estimated as a direct function of income-eligible infants, their inclusion would not have a significant impact on the percentage distribution of eligibles among States. In addition, FCS does not attempt to make estimates of the incidence of nutritional risk at the State level, as accurate data on State-specific incidence of nutritional risk is not available.

In order to address your question, the Agency has calculated the number of income-eligible women in each State for 1994 (latest data available), assuming the same relationship between the number of income-eligible infants and income-eligible women as is used for developing National estimates. These estimates were added to the estimated number of income-eligible infants and children to create State-level estimates of the total income-eligible population in 1994. These estimates were then compared to average monthly participation by State in order to estimate participation rates among the income-eligible population in 1994.

While these data can provide some indication of the relative coverage of the WIC program by State, they cannot be considered true coverage rates because they do not factor in the incidence of nutritional risk. Further, they are not directly comparable to the National WIC coverage estimates produced by FCS, which are based on the fully-eligible population estimate.

[The information follows:]

RATES OF PARTICIPATION (BY STATE) AMONG WIC ELIGIBLES—FISCAL YEAR 1994

State	Income-eligibles estimate ¹	Monthly average participation	Percent of income-eligibles served (coverage rate)
Alabama	177,042	122,328	69
Alaska	32,432	15,882	49
Arizona	229,461	115,676	50
Arkansas	112,701	87,829	78
California	1,824,764	897,706	49
Colorado	118,844	69,556	59
Connecticut	86,553	65,244	75
District of Columbia	36,101	17,656	49
Delaware	23,019	15,838	69
Florida	598,798	299,907	50
Georgia	317,542	210,799	66
Guam	10,909	5,572	51
Hawaii	50,389	24,846	49
Idaho	49,864	31,849	64
Illinois	458,152	232,338	51
Indiana	215,141	134,428	62

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RATES OF PARTICIPATION (BY STATE) AMONG WIC ELIGIBLES—FISCAL YEAR 1994—Continued

State	Income-eligibles estimate ¹	Monthly average participation	Percent of income-eligibles served (coverage rate)
Iowa	85,964	60,379	70
Kansas	95,283	58,609	62
Kentucky	164,481	115,677	70
Louisiana	230,522	122,200	53
Maine	38,239	27,281	71
Maryland	143,210	83,678	58
Massachusetts	149,391	111,288	74
Michigan	398,543	207,614	52
Minnesota	130,165	93,721	72
Mississippi	155,478	103,560	67
Missouri	217,997	121,651	56
Montana	32,934	19,898	60
Nebraska	48,541	34,791	72
Nevada	52,287	27,527	53
New Hampshire	23,412	19,437	83
New Jersey	193,556	139,176	72
New Mexico	107,632	51,915	48
New York	834,469	437,735	52
North Carolina	296,137	177,250	60
North Dakota	21,536	18,146	84
Ohio	395,560	252,653	64
Oklahoma	151,563	89,627	59
Oregon	110,199	76,947	70
Pennsylvania	388,848	260,398	67
Puerto Rico	425,143	170,391	40
Rhode Island	33,005	20,624	62
South Carolina	168,471	120,915	72
South Dakota	28,738	22,910	80
Tennessee	235,378	131,632	56
Texas	1,055,151	614,694	58
Utah	84,600	55,387	65
Vermont	19,974	16,136	81
Virgin Islands	8,781	7,552	86
Virginia	198,132	126,798	64
Washington	186,969	101,637	54
West Virginia	81,256	52,268	64
Wisconsin	137,611	107,088	78
Wyoming	17,008	12,256	72

¹This estimate does not include persons who become adjunctly income-eligible through State Medicaid programs with eligibility standards over 185 percent of poverty.

WIC FUNDING FORMULA

Senator COCHRAN. Of course, those would be States that you would give more money to under your new plan.

Mr. BRALEY. The funding formula that we developed was developed at a time when WIC participation and funding was growing dramatically from year to year. We have reached the point now where funding is relatively stable.

As a result, this year, for the first time, we were not able to meet last year's grant levels plus inflation in States because the resources were not there. That meant everybody was treated exactly the same as they had been historically in terms of being able to

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maintain participation. If we had some additional funding, it would have been nice to recognize the fact that some States have not had an opportunity to reach their potential. That is one factor which would be considered in making allocations under the budget request.

Senator COCHRAN. Do you think some of these reasons are societal or cultural and there is less willingness to admit that you need to depend on the Government for help, or can you look to your neighbors, or to the churches or the community to help you meet those needs? Is that part of the reason why we have those differences among States?

Mr. BRALEY. Well, that may be a part of it. But, Mr. Chairman, what we are looking at is that some States are now using all of the resources that they have available to them. They are serving a smaller proportion of their State's eligibles than their neighboring States and have indicated that they have more people that could potentially be served if the resources were available. We are not trying to encourage States to take money that they cannot effectively use to serve additional clients. Any resources we get would be targeted to States who have a demonstrated ability to use that money to serve eligible clients.

WIC PARTICIPATION VARIATION AMONG STATES

Senator COCHRAN. Well, it would be helpful to have your analysis and explanation in writing for the record to set out what you have learned over time and where we are in the recognition of differences among States and why they do or do not participate in the program, and why some participate more than others. That would be helpful to know.

[The information follows:]

There are numerous reasons why States would have varying degrees of participation among their eligible populations. Historically, States have varied in the degree to which they have emphasized development and expansion of the WIC program since its establishment in 1972. Those States which emphasized WIC expansion at an earlier stage generally were funded at relatively higher levels than other States. More recently, States have differed in their ability to develop infrastructure and conduct outreach in order to reach more of their eligible population. In addition, States' per-person costs can vary substantially. States with relatively low costs for example due, to higher infant formula rebates, are able to serve more persons with the funds available to them.

In 1995, the formula used by FCS to determine State's WIC food grants was revised, in part to better target funds to States which have been underfunded relative to the size of their eligible population. The formula defines each State's "fair share" of total available funds as equal to their share of the estimated total population of income-eligible infants and children. After providing each State funds equal to the prior year grant plus inflation, the formula targets all remaining funds to States which are under their "fair share".

Senator COCHRAN. You suggest, without saying so, that you may be submitting a new regulation in this connection. You indicate, for example, that this legislative discretion to revise the funding formula is needed in recognition of the time needed for a regulatory change, et cetera.

So you are contemplating, I presume, making a change in the regulation, is that not correct?

Mr. BRALEY. That is correct, Mr. Chairman. I think we need to do that in recognition of the fact that the dynamics of the program

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have changed as it is reaching full funding levels. The last time we wrote a regulation governing the funding formula, it was when we were foreseeing continued growth for a number of years in the program. I think the dynamics of the situation now warrant at least a reopening of that issue, although we could conceivably come out somewhere near where we are now. But I think the circumstances have evolved to a point where it is time to reopen that question.

WIC AND NATIVE AMERICANS

Senator COCHRAN. Are these program dollars available on native American reservations and through tribal organizations?

Mr. BRALEY. They are, Mr. Chairman. Over 30 of the State agencies that we speak of when we talk about 86 or 87 State agencies in the WIC Program are organizations that serve native Americans. They function as independent tribal organizations in administering the WIC Program.

Senator COCHRAN. Do you see any differences in the administration of the program in terms of overall costs or participation levels among those groups as you do among the population at large?

Mr. BRALEY. Mr. Chairman, I have not looked at the specific figures. I imagine the administrative costs in some of the smaller organizations could be slightly higher just due to economies of scale.

I think in terms of being responsive to the needs of the native American populations that they are serving, I think they are quite effective.

Senator COCHRAN. I assume then that you are going to proceed with a regulatory change so that even if we provide you with some language that you would find helpful, that would be only an interim authority. You would proceed with the regulatory change in any event.

Ms. KEEFFE. That is correct, Mr. Chairman. But as you know, going through the regulatory process takes time. That is why we are requesting an immediate change through the appropriations process.

WIC INFANT FORMULA REBATES

Senator COCHRAN. You may have answered this awhile ago. You were talking about the infant formula rebates. Has the Department taken action through the regulatory process on this? Do you have a regulation on that now?

We included legislative authority in the appropriations bill last year to ensure maximum cost savings from infant formula rebates, that infant formula rebates be awarded on the basis of lowest net wholesale cost.

In our report, we indicated that we were acting on an interim basis and encouraged the Department to utilize the rulemaking process to address the issue on a permanent basis. Has that been done?

Mr. BRALEY. That regulation is in clearance within the Department, and we hope to issue it in the near future.

Senator COCHRAN. What savings, if any, can you identify from competitive bidding for the purchase of infant formula for WIC participants over time, from 1995 to 1997, for example? How many

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participants have been funded as a result of savings in each of these years?

Ms. KEEFFE. Currently, Mr. Chairman, we estimate \$1 billion annually is saved or comes back into the program through rebates, and that the savings accounts for approximately 24 percent of WIC participants.

WIC AND CHILD IMMUNIZATION

Senator COCHRAN. Do you know what increase in child immunizations can be attributed to the WIC Program? I mentioned that in some of my comments about the program. Do we have any kind of quantitative analysis of that?

Ms. KEEFFE. I do not have a figure available with me, but we certainly can look into it. It is an area where the program has been very aggressive. We will certainly be glad to submit it for the record, if there is a figure or at least an estimate in that regard. [The information follows:]

While the Centers for Disease Control and Prevention (CDC) data suggest that immunization coverage rates are at an all time high, the data is not sufficiently detailed to be able to specifically attribute the increase to a particular initiative or program such as WIC. Nevertheless, given the many activities and cooperative efforts underway in the WIC program, and CDC's special emphasis on using WIC as a major conduit to a large segment of the target population, it would be reasonable to assume that WIC is instrumental in facilitating major positive impacts on coverage rates. CDC has made the assertion that WIC is one of its most important allies in raising and maintaining immunization coverage rates. In fact, CDC has suggested that WIC may have been instrumental in the control of the 1989–91 measles epidemic.

WIC program administrators at all levels agree that one of the major public health challenges of this decade is a need to improve our Nation's capacity to deliver age-appropriate immunizations to infants and young children in need. As an adjunct to critically needed health care, the WIC Program plays a large role in the public health community's response to immunization promotion. While applicants may be prompted to come to the WIC clinic just for food help, they are also provided WIC nutrition education and enter a gateway to health care services through WIC referrals. Among these services are immunization screening and referrals. As the largest single point of access to preschool children nationally—reaching about 45 percent of all infants—WIC can make and is making a positive difference in the health and well being of low income children.

The FCS and CDC have developed and maintained a strong partnership with State cooperators in WIC and immunization to improve the quality of services and the health status of children under 2 years of age who are in need of nutrition assistance and immunizations.

To help raise and sustain high immunization coverage rates, numerous special WIC immunization promotion activities are taking place at the National, State and local levels. All WIC State agencies (including territories and Indian Tribal Organizations) are actively involved with immunization promotion activities. These activities range from comprehensive immunization screening and referral procedures and media campaigns to providing incentives and sending immunization reminders to clients. Some WIC agencies have expanded clinic hours to include immunization screening and others have formed immunization promotion task forces and committees. Many offer on-site immunizations for the convenience of families.

As a result of these initiatives, the WIC Program has been and will continue to be a major contributor to the current high levels of immunization coverage among low income children in the United States.

Just over the past year activities have included:

—The National Association of WIC Directors (NAWD), the Association of State and Territorial Health Officials (ASTHO), CDC, and FCS co-hosted a WIC immunization promotion conference, entitled "Working Together for Healthier Children," February 12 and 13, 1997. The conference fostered positive communication at the State level between Immunization Programs and the WIC Program by: increasing understanding of each programs' goals and objectives; and highlighting win-win situations in State and local WIC and immunization part-

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nerships. The conference also focused on State WIC Directors' and Immunization Program Managers' concerns.

—FCS, CDC, NAWD, and ASTHO have formed the WIC/Immunization Research and Evaluation Subcommittee. The purpose of this group is to coordinate research and evaluation activities directly related to immunization promotion efforts in WIC. The Subcommittee facilitates and reports on cost-effective strategies that improve vaccination coverage rates among WIC participants.

—FCS has been active and supportive of strengthening State Immunization Information Systems as a major initiative to improve immunization status assessment and referrals among WIC children. To further promote this linkage, in fiscal year 1996, FCS awarded a total of \$946,793 for State *WIC/Immunization System Linkage Grants* to nine WIC State agencies to design, develop, and implement information system linkages between State Immunization Information Systems and WIC data systems at the State and local levels. Made possible through funding from the Centers for Disease Control and Prevention's National Immunization Program, the purpose of this partnership is to enhance automation capabilities in WIC clinics to facilitate accurate and efficient assessment of the immunization needs of WIC infants and children. Grants were awarded to the following States: Alabama, Chickasaw Indian Nation, Florida, Iowa, Massachusetts, Nevada, Rhode Island, Texas, and Virginia.

—During the 1997 31st National Immunization Conference to be held in Detroit, Michigan, the WIC Program will be a prominent point of discussion. Representatives from FCS and State and local WIC staff will be present at approximately 25 workshops and many poster sessions. The conference provides WIC with an opportunity to show the more than 2,000 attendees from both private and public sectors WIC's commitment to improving the quality of services, preventing the occurrence of health problems, and improving the health status of WIC participants under 2 years of age.

Immunization promotion activities in WIC are comprehensive and numerous. FCS would be pleased to provide a briefing in greater depth regarding WIC's role in increasing and maintaining immunization coverage rates.

Senator COCHRAN. You might check in our State of Mississippi. I think we have the best participation rate and immunization rate of any State in the Union for childhood immunizations.

It is not just because of the WIC Program, but it is because of strong leadership in the public health community and in State government agencies. So the Federal Government cannot claim any credit for it.

But I point it out to say that the Federal Government might be able to learn from the successful experience in the State of Mississippi and use that in your communications and training programs that you have with administrators from other States, if they would like to find out how that was achieved. It might be helpful.

We are talking about overall health of our population of children around the country, and that is one of the main goals of the WIC Program. This is something that ought to be emulated.

Ms. KEEFFE. Right. Thank you.

Senator COCHRAN. That is a matter of record in hearings that the Appropriations Committee had a couple of years ago. So it is not new information. But we continue to achieve great results in our State in that area.

WIC FARMERS MARKET NUTRITION PROGRAM

Senator Leahy mentioned the Farmers Market Nutrition Program. I did not think any State but Vermont was eligible for that program. [Laughter.]

Was I wrong about that? I notice you asked for some money here, to increase the funding from \$6.75 to \$12 million. Will that extend the program to Mississippi, or will it still be in Vermont only?

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Ms. KEEFFE. Well, Mississippi is one of those States that I referred to, Mr. Chairman, that has expressed interest in becoming part of the program. We are hopeful that with that additional funding this year, that they will join.

Senator COCHRAN. Well, that is good to hear. And I am hopeful that we can look at other options for making sure that we have food, nutrition, education, and health care available to those who need that kind of assistance from the Federal Government. So when we can expand Federal programs like WIC, particularly those that are cost effective, we want to encourage it.

Ms. KEEFFE. Of course, I think the Farmers Market Program is one of those little jewels that really accomplishes so much with a relatively little amount of money.

In terms of being part of the Department of Agriculture, that connection is made with agriculture and small local resource farmers. It introduces people to the whole concept of purchasing nutritious foods from their local farmers, and the benefits of fresh foods. We think this is wonderful, especially for people who otherwise really do not know that this exists.

NUTRITION EDUCATION AND TRAINING PROGRAM

Senator COCHRAN. I know when we visited the other day in anticipation of this hearing, we talked about the Nutrition Education Training Program, the NET Program, and the supplemental funding request. There has been \$10 million in annual direct funding for NET in previous years.

The administration's fiscal year 1997 supplementals and rescissions package includes proposed legislative language to shift to the NET Program \$6.25 million in food stamp funding for commodity purchases of The Emergency Food Assistance Program.

Given the fact that grants to States are available through the school meals initiative, and you have reprogrammed funds to make available almost \$4 million in fiscal 1997 funding for the NET Program, why is it a priority to provide additional supplemental funding for this program?

Ms. KEEFFE. Well, Mr. Chairman, the NET Program has existed for almost 20 years and has a well-established record of success in providing nutrition education for the child nutrition programs.

As you mentioned, the money was lost last year through legislation that moved simultaneously on two different tracks. Our appropriations legislation was completed before welfare reform was. In welfare reform, the NET money was dropped from the mandatory account and we had no means to fund it on the appropriations side.

Beginning in 1996, the school meals initiative for healthy children standards were taking effect in schools where we were upgrading nutrition standards. The nutrition education component of that is very important. And the NET network, if you will, which always provided that education, no longer had a means to function. We were able to take \$3.75 million from Team Nutrition education funds to temporarily fund it.

However, that was all the money that was available for us to move at that time. The other money in the Team Nutrition account was earmarked for training and technical assistance, most of it in

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the form of grants to States for training and really was not appropriate for NET funding.

Therefore, we have asked for the additional \$6.25 million as a supplemental for fiscal 1997, and requested that the \$10 million, the amount NET has been funded at in recent years, be a part of fiscal 1998.

NET provides the infrastructure for nutrition education and the Team Nutrition funding provides the materials for that education. The two really work in conjunction with each other, in partnership, to provide that very important nutrition education message to children.

NET; IMPACTS OF WELFARE REFORM

Senator COCHRAN. What is confusing to me is that the welfare reform bill eliminated the funding for NET, as requested by the administration. That is my information. Did the administration not request that permanent funding be eliminated in the welfare reform process?

Ms. KEEFFE. I do not believe so, Mr. Chairman. It had moved over into the mandatory account last year.

Mr. BRALEY. Mr. Chairman—

Ms. KEEFFE. We are going to clarify.

NET FUNDING

Mr. BRALEY. Yes; we can provide that information for the record in terms of the sequence of events. I believe there was a request to shift the funding from one area to another, and it did not get funded last year, I think that was inadvertent. That is the reason we are in this position.

Senator COCHRAN. We have so many accounting games that we play with each other, it is hard to figure out what is on the level anymore. I think we are turning ourselves into not only just counting beans, but it is difficult to communicate with all these rules and nuances that I do not fully understand I have to admit.

Well, I would appreciate an explanation of that for the record. It seems that we have on the one hand the administration requesting elimination of the direct funding of a program, and then coming in and asking for a supplemental to restore part of the funding and then shifting money, reprogramming from another account to have it funded.

We all know there is a constituency out there that loves the program. I learned that really early on when I said, Why did we fund this? And the answer was, Because everybody likes it.

We have a lot of folks out there who would be upset if you terminated this program or made any cuts in it. We have had a \$10 million program for a good while.

[The information follows:]

NUTRITION EDUCATION AND TRAINING (NET) FUNDING FOR FISCAL YEAR 1997

Neither the budget request nor the Appropriations Act for fiscal year 1997 contained funds for NET because funds were available under permanent appropriations authorized under Child Nutrition legislation prior to welfare reform.

NET was specifically identified as a program not funded in the 1997 Appropriations Act. As part of Welfare Reform, the permanent funding for NET was deleted.

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The Agriculture Appropriations Act for Fiscal Year 1997 passed, followed quickly by the passage of Welfare Reform. Due to the timing of the two pieces of legislation, there was no opportunity to add funding to the Appropriations Act. Welfare reform also changed the funding authorization from mandatory to discretionary.

Subsequent to the passage of the Appropriations Act for fiscal year 1997, \$3.75 million was reprogrammed within the Child Nutrition account to make the funds available for NET. Funds were issued to States in December, 1997.

Ms. KEEFFE. Well, I think it is also an important time in terms of the work of that program, too. We certainly heard very clearly, when we were upgrading the nutrition standards in school meals, how important it is to reach children with nutrition education, as well reach the school food service providers with the training and technical assistance that was important to them.

The work NET does and the fact that it is well established and well received in the school community is crucial at this time, considering that we are making vast changes in the meals. It is important that we continue to reach the children in any way necessary.

IMPACTS ON NET PROGRAM ACTIVITIES

Senator COCHRAN. I have a question here that my staff has prepared, and I am going to ask it, because I am curious to know what the answer is. You may have already answered it, though.

What activities are not being funded by States with available NET Program funding of \$3.75 million?

Mr. BRALEY. Mr. Chairman, as I understand it, the States are barely able to keep a program operating at this point at that funding level.

A lot of States have curtailed significantly their programmatic activities, work with actual school districts, and their customary nutrition education to teachers and food service workers.

Early on, before the shift in funding was done to provide even the \$3.7 million, a number of NET coordinators were laid off. Consequently, there has been a severe impact on the ability of that program to perform its function.

I think it is safe to say that folks who are still working in that area are doing the best they can with very limited resources, but it is not funded at a level that will sustain the kind of quality program we have had historically.

Senator COCHRAN. I think you and I both misunderstood the question. And that is why I asked it, to see if I could figure it out while you were answering it.

TEAM NUTRITION FUNDING

I think what the question means is, since the \$3.75 million was reprogrammed by the administration from the school meals initiative line item, what programs that had been paid for with that money suffered the loss of \$3.75 million and what was the impact of that on the States?

Ms. KEEFFE. Well, that money would have gone for educational materials related to the Team Nutrition effort. A lot of that money is in the form of 2-year money. We had money in the pipeline that was able to carry forward a lot of the materials that were already in progress.

Certainly one notable area where I have had personal experience when visiting a lot of schools is getting our materials translated

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into Spanish. We have a tremendous need for this throughout the country, but we have recognized we are not going to be able to fund it this fiscal year. We have had to make it clear to States that they will have to wait until next year.

So it basically is materials in support of our Team Nutrition schools, which now we have 20,000 schools across America that have signed on to be Team Nutrition schools. The nutrition education materials that we have as part of that effort to get into schools, to help with nutrition education for the children, is definitely on a slower track as a result of the loss of those funds for that part of the program.

COMMODITY ASSISTANCE PROGRAMS

Senator COCHRAN. I am going to submit questions regarding the Commodity Assistance Program and some of the other programs. I visited one of our warehouses in Jackson, MS, where a lot of these commodities are accumulated and distributed to soup kitchens and others providing meals to folks in that fashion. It seemed to me to be an important program to support, and I hope that we can find a way to continue to support that.

Do you provide enough flexibility, do you think, in these programs to suit the administrators in the States? I know you are adding programs to the Commodity Assistance Program, the Nutrition Program for the Elderly, and Pacific Island Assistance. Is this to give people more flexibility or less?

Ms. KEEFFE. In the commodity assistance programs, Mr. Chairman, we are providing more flexibility than we have in the past through legislation which has combined the old TEFAP Program, along with soup kitchens and food banks.

It is really the States who are able to determine best how to serve the needs of their communities, whether through congregate feeding in soup kitchens, through pantry food banks, or mass distribution of commodities, which used to be the old TEFAP Program.

States make the determinations. The administrative funding applies across the board to help run those programs in the best way.

In addition to that, of course, the funding also comes into play with the gleaning and food rescue initiatives that the Department has been undertaking, which of course are voluntary efforts on the part of people to secure more foods for soup kitchens in food banks. Those administrative funds for the commodity assistance programs have been very beneficial in helping to handle those extra foods that they get through those processes as well.

FOOD RECOVERY AND GLEANING

Senator COCHRAN. I am also interested in the National Food Service Management Institute funding, and I will submit questions on that and Team nutrition as well and on administrative costs, research and evaluation, and other subjects.

You mentioned the food recovery and gleaning initiative. I think Bill Emerson led an effort to put that into law, the Good Samaritan Act, I think it is now called.

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The Secretary indicated that at the Department there is an initiative under way to carry out the spirit of that law and try to reclaim foods and distribute them to places where the need exists.

Is there any effort by the Food and Consumer Service to implement that program? What progress, if any, are you making in that regard?

Ms. KEEFFE. Mr. Chairman, we have worked very closely with the goals of that program—I hesitate to call it a program because that has other implications—but with that effort of the Secretary. I know the Secretary takes every available occasion to encourage groups to help out with this effort.

It has many facets, from gleaning in the fields, to food rescue from supermarkets, terminal docks, or leftover foods from restaurants, and matching this excess food, which is of course in tremendous quantities in this country, to people in need.

Certainly through our commodity assistance programs, soup kitchens, and food banks, there is a natural connection. So we have been working with the Secretary's efforts through our Food Distribution Division, which works with those programs.

As I said, the important administrative funding for these commodity programs helps them to deal with the foods that originate from this voluntary effort. It has been very exciting. I think it has been very well received. The Department, of course, for many years has been providing food to D.C. Central Kitchen from our own cafeterias every week. The Secretary has been encouraging other Federal Departments to do the same.

Senator COCHRAN. In a visit I had to the Mississippi gulf coast, we were conducting hearings on the subject of the growing aquaculture industry there, shellfish particularly, and research using fish instead of other animals for research laboratories.

Anyway, part of our tour included a stop at a place where they were developing machinery to reclaim what would be wasted fish that would have been thrown away. And it was just amazing.

They were making products like—what is it? It is something that you can use just a regular fish and make it taste like crabmeat or lobster or shrimp, some of these other varieties of shellfish particularly.

It was quite amazing to see the efficiencies and the technologies that can be harnessed in reclaiming food waste like that. I hope we do learn to waste less and be more efficient in the use of our food supply.

It is almost shameful how much food we throw away every day in America. I have the notion that we could feed entire countries from just the scraps from the tables of American families.

AGENCY ADMINISTRATION

There are a couple of questions that I had in my notebook, which I was going to submit, about program administration requirements. You mentioned that there were problems regarding appropriations for staff-years.

And you have not had, because of restricted staff-year ceilings in these accounts, any option except just to deploy staff from crisis to crisis, which makes effective program administration nearly impossible.

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You do have a lot of responsibilities, nearly \$40 billion in program funds to administer. That is quite a huge amount. I think that has gotten up to over 70 percent of the Department's total budget.

Ms. KEEFFE. Yes; that is correct. Moreover, we have less than 2 percent of the personnel.

Senator COCHRAN. How many staff have you lost? Do you have numbers to indicate lost staff-years from your agency?

Ms. KEEFFE. I do. Actually, one of the ways I look at it is to go back to 1980, because the growth of our programs from that time has been dramatic. And yet our staff and administration levels have been dropping significantly.

STREAMLINING GOALS

We dropped from 2,800 employees to 1,750 today, which is about a 40-percent decrease. During that same time, our programs have doubled in size. It really is a critical situation.

And, as you know, we have a major integrity role in these programs. There has been a lot of recent emphasis on this. It is something that we take very seriously but we really have reached the point at which we are truly at a barebones level of operation.

Just in the few years that I have been associated with the programs, we have lost 60 personnel one year, and 80 in another. Now those do not sound large when you are talking about numbers of Government employees, but out of a total base of less than 2,000 people, those are substantial numbers in a given year.

I really think that we are to a point which we cannot go below. What we have requested is holding the line where we are. We have met all of our streamlining requirements, and are ahead on those numbers. So we really need to stay the course in terms of where we are right now.

Mr. LUDWIG. Mr. Chairman, Mary Ann is exactly right. We have reached all our streamlining objectives. But what she did not mention is that we met our streamlining objectives 3 years ahead of schedule. In the past 4 years, FCS has reduced our supervisory ratio by 40 percent to a 1-to-7 ratio and we reduced headquarters staff over 12 percent. This also was 3 years ahead of our schedule. Additionally, we reduced the number of senior staff level positions, that is GS-14's, 15's, and SES'ers, by over 18 percent over the last 4 years.

Basically, Mr. Chairman, we do not have the bodies to do the everyday preventive maintenance of our programs. On any given day, we will have between 12 and 18 audits, either through the Inspector General's Office or the GAO office, evaluating our agency.

Based on those numbers and the reduced numbers of staff-years, we go, as you said, from crisis to crisis instead of being able to be proactive in our programs and heading off crises.

Senator COCHRAN. What is the answer to it?

Mr. LUDWIG. We have reduced staff as Mary Ann has said, anywhere from 60 to 100 positions every year. Over the last 17 years, we have lost in excess of 1,000 employees. We are down to less than 1,800, about 1,750. If I could just hold what I have, I would be happy.

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Senator COCHRAN. Well, you have asked for an increase of \$1.6 million above last year's level for program administration.

Mr. LUDWIG. Those numbers basically cover inflation.

Senator COCHRAN. Does it take into account cost-of-living adjustments or pay increases and the like—

Mr. LUDWIG. Yes, sir; it includes one-half of the mandatory pay increases.

Senator COCHRAN. For all the employees?

Mr. LUDWIG. Yes, sir.

CLOSING REMARKS

Senator COCHRAN. Well, we appreciate very much your explanation of the Department's request for these programs that are under this subcommittee's jurisdiction. They are all very important and serve very important needs in our Nation.

This committee wants to work with you in a cooperative way to be sure that the programs receive the funds that are necessary for their appropriate administration, and we will work to achieve that goal with you.

SUBMITTED QUESTIONS

For the questions that are submitted, we hope that you will be able to respond to them in a timely fashion so we can have the benefit of your input into the process as we decide on the levels of funding for this next fiscal year.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR COCHRAN

WIC FISCAL YEAR 1997 SUPPLEMENTAL FUNDING REQUEST

Question. The Administration is seeking \$100 million in fiscal year 1997 supplemental funding for the Supplemental Nutrition Program for Women, Infants, and Children (WIC).

What has been the increase in the cost of a food package above the original fiscal year 1997 budget estimate level?

Answer. In the original 1997 budget, the Agency estimated that the average cost of a WIC food package for all of fiscal year 1997 would be \$31.91—about 3.3 percent above what was estimated at that time would be the final for 1996. However, the actual average cost of a food package in the first quarter of 1997 is \$31.85—about 4.2 percent above first quarter 1996, which was \$30.53.

Question. What has been the increase in the average monthly caseload above the fiscal year 1996 level?

Answer. Average monthly WIC caseload in fiscal year 1996 was 7.193 million. At the end of fiscal year 1996 the caseload was 7.428 million. During the first quarter of fiscal year 1997, caseload averaged 7.386 million—that is, in October of fiscal year 1997 caseload was 7.474 million, in November it was 7.400 million and in December it was 7.283 million. The WIC program has a normal seasonal pattern in which participation falls in December and rises again in January.

Question. What did the Department do at the outset of the fiscal year to manage the WIC Program within available funding to avoid disruptive participation cuts and to first serve "high priority" women, infants and children?

Answer. Total fiscal year 1997 projected grant and participation levels, including reallocation estimates, were provided to States in September. States were advised that the total funds available for fiscal year 1997 would not be sufficient to meet last year's grant levels, adjusted based on inflation. These September estimates indicated that many States would need to manage caseload levels carefully to ensure expenditures would not exceed available fiscal year 1997 funding.

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In January, when it was clear that many WIC State agencies might be in danger of overspending their WIC grants, FCS transmitted alerts to all WIC State agencies of the seriousness of the situation and requested State spending and participation plans for fiscal year 1997. States were again provided estimated grant levels reflecting all anticipated available funding, to include both appropriated funds and reallocation of prior year unspent funds. The agency will continue to work with States that will need to reduce caseload levels and /or tailor food packages more based on recipient need and/or increase food package management efforts as the year progresses so they will not overspend their grant.

When funds are not available to serve all eligible persons seeking WIC services, State agencies are required by WIC Program regulations to establish waiting lists which use a participant priority ranking system. Participants are assigned a priority level at certification which is based on their degree of nutritional and medical risk. This priority system ensures that the highest priority persons are served when caseload slots become available.

Question. You indicate that without this supplemental funding, states will have to reduce participation by 400,000. Would you please justify this estimate and give us reductions which would occur by state.

Answer. At the end of fiscal year 1996, WIC participation was 7.4 million persons and has remained at approximately this level through the first quarter of fiscal year 1997. FCS estimates that the current appropriation will serve an average of 7.2 million persons per month in fiscal year 1997. In order to achieve an average of 7.2 million for fiscal year 1997, WIC participation must fall to 7.0 million by year end—a reduction of approximately 400,000 women, infants and children who would otherwise receive WIC benefits. The Agency does not have adequate information at this time to produce State-by-State estimates associated with this 400,000 reduction in participation.

States have submitted detailed expenditure and participation plans to FCS, that were provided to the subcommittee on March 13, 1997. However, based on historical evidence, our analysis indicates that the expenditure assumptions upon which many State plans are based are not supportable, because they indicate that States will spend all or nearly-all the resources available in 1997. Without a supplemental in fiscal year 1997, the Agency estimates that participation may decline by 400,000 by the end of the year and that there will be a significant drawdown of carryover funds.

Question. Will 400,000 current WIC participants be dropped from the program without the supplemental funding requested? Please explain.

Answer. At the end of fiscal year 1996, WIC participation was 7.4 million and has remained at approximately this level through the first quarter of fiscal year 1997. FCS estimates that the current appropriation will serve an average of 7.2 million persons per month in fiscal year 1997. This assumes that funds States carryover from 1996 to 1997 is reduced by \$45 million and these funds are used to support participation in 1997. In order to achieve an average of 7.2 million for fiscal year 1997, WIC participation must fall to 7.0 million by year end—a reduction of approximately 400,000 women, infants and children who would otherwise receive WIC benefits.

When participation demand exceeds available funding, WIC State agencies establish participant waiting lists based on a priority system established by nutritional risk criteria and/or tailor the food packages more carefully to address specific recipient nutritional needs. It is anticipated that WIC State agencies will employ a variety of measures to reduce caseload, as necessary. Some participants may no longer be at nutritional risk at the end of their certification period and would therefore not be recertified. Also, States may choose, in accordance with Program regulations, not to recertify lower priority participants at the completion of the current certification period, providing benefits to only those determined to be in the highest priority categories. Many States may need to establish waiting lists for all or most new applicants, again in accordance with the priority system established by the WIC State agency. As a last resort, State agencies do have the authority to discontinue Program benefits to certified participants. Such action may be taken only after the State agency has explored alternative actions. If taken, the action should affect the least possible number of participants and those participants whose nutritional and health status would be least affected by the withdrawal of Program benefits.

The expectation is that States will continue to do their best to carefully manage their caseloads and closely scrutinize and monitor their expenditures, making adjustments to caseload as necessary, by not certifying new applicants, by not recertifying some recipients or, as a last resort, by discontinuing benefits mid-certification.

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WIC FARMERS' MARKET NUTRITION PROGRAM

Question. The fiscal year 1997 appropriations act makes "up to" \$6.75 million of the funding provided for WIC available to carry out the WIC Farmers' Market Nutrition Program. If the Administration thought there might be a shortfall in funding for WIC, why did it make funding available to the WIC Farmers' Market Nutrition Program?

Answer. In September 1996, FCS allocated the farmers' market funds based on the best available information that was available at that time. That information reflected that approximately \$145 million in recoverable fiscal year 1996 WIC funds would be available in addition to the fiscal year 1997 appropriated funds. It was thought that the sum of these funds would be sufficient to support the expected WIC September 1996, participation level of 7.3 million.

Subsequently, data became available reflecting a higher participation rate than anticipated. Thus, it became apparent that WIC caseloads could not be fully maintained with currently available funding for fiscal year 1997. In response to this unanticipated need, the Agency has requested supplemental funding, so that both the FMNP and, the WIC Program may continue without disruption.

Question. The Administration's requested supplemental language also proposes to allow the Secretary of Agriculture to distribute the supplemental funds among States using criteria other than the current regulatory funding formula. How would the Secretary's distribution of these funds differ from the current regulatory funding formula? Please provide a comparison by state.

Answer. Current WIC program funding regulations require that the first priority for allocating funds is to provide all State agencies with stability funding, which is each State agency's prior year food grant plus inflation. Funds remaining after stability food grants are met are allocated through the fair share component. A State's fair share of funds is defined as equal to its share of the National estimated WIC-eligible population. The fair share component provides funds to States with stability grants below their fair share level.

The Department is requesting flexibility in allocating the supplemental funding in order to ensure that the Secretary allocates funds with the goal of minimizing fluctuations in program participation. FCS anticipates that the allocation process of the supplemental funds would be as follows: (1) allocate funds to under fair share State agencies requiring additional funds to maintain current participation; and to the extent that additional funds are available, (2) allocate funds to over fair share State agencies requiring additional funds to maintain current participation up to the level of their defined stability grants.

The Agency is currently unable to provide an allocation comparison by State. One element in determining eligibility for supplemental funding is not known at this time—the magnitude of declines in participation resulting from financial shortfalls. However, information reflecting each State's percent of fair share as of March 1997, is provided for the record.

[The information follows.]

WIC PROGRAM FISCAL YEAR 1997 FOOD GRANT AS PERCENT OF FAIR SHARE

[As of January reallocation]

State agency	Fiscal year 1997—		(C) Food grant as percent of fairshare
	(A) Fairshare (w/ January reallocation)	(B) Food grant (w/January reallocation)	
NERO:			
Connecticut	\$21,250,368	\$27,253,449	128.25
Maine	9,449,961	9,853,574	104.27
Massachusetts	36,670,089	39,675,626	108.20
New Hampshire	5,492,504	6,058,806	110.31
New York	198,815,414	190,924,889	96.03
Rhode Island	8,130,507	8,394,806	103.25
Vermont	4,927,626	6,428,953	130.47
Indian Township	20,334	51,633	253.92
Pleasant Point	20,334	51,277	252.17
Seneca Nation	284,165	196,710	69.22

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WIC PROGRAM FISCAL YEAR 1997 FOOD GRANT AS PERCENT OF FAIR SHARE—Continued

[As of January reallocation]

State agency	Fiscal year 1997—		(C) Food grant as percent of fairshare
	(A) Fairshare (w/ January realloca- tion)	(B) Food grant (w/January re- allocation)	
Subtotal	285,061,303	288,889,723	101.34
MARO:			
Delaware	5,637,336	5,881,309	104.33
Dist Columbia	8,227,163	6,907,483	83.96
Maryland	35,128,720	35,707,939	101.65
New Jersey	47,435,289	53,338,129	112.44
Pennsylvania	95,551,983	99,467,345	104.10
Puerto Rico	99,914,129	110,483,381	110.58
Virginia	48,321,749	51,863,779	107.33
Virgin Islands	2,739,319	4,449,299	162.42
West Virginia	19,920,678	20,636,087	103.59
Subtotal	362,876,365	388,734,751	107.13
SERO:			
Alabama	43,192,080	44,041,321	101.97
Florida	146,596,396	130,226,516	88.3
Georgia	77,469,568	80,480,204	103.89
Kentucky	40,045,506	44,707,356	111.64
Mississippi	37,661,546	38,986,361	103.52
N Carolina	72,296,903	64,366,359	89.03
S Carolina	41,378,508	42,517,123	102.75
Tennessee	56,464,000	57,123,217	101.17
Seminoles	83,358	130,607	156.68
Choctaw, MS	213,876	191,103	89.35
E. Cherokee	211,917	338,855	159.90
Subtotal	515,613,658	503,109,022	97.57
MWRO:			
Illinois	109,335,184	109,181,078	99.86
Indiana	52,559,537	47,897,520	91.13
Michigan	92,700,795	82,863,707	89.39
Minnesota	31,323,020	32,682,605	104.34
Ohio	96,977,427	86,602,032	89.30
Wisconsin	33,822,214	40,766,412	120.53
Subtotal	416,718,178	399,993,354	95.99
SWRO:			
Arkansas	27,575,435	30,593,402	110.94
Louisiana	53,078,346	57,569,814	108.46
New Mexico	21,324,664	19,249,196	90.27
Oklahoma	31,718,305	30,697,307	96.78
Texas	256,565,664	202,319,522	78.86
Acl, NM	183,811	302,196	164.41
8N Pueblo	236,950	195,901	82.68
Isleta	376,797	289,314	76.78
Santo Domingo	127,537	161,635	126.74
5 Sandoval	171,517	206,581	120.44
San Felipe	140,731	161,705	114.90

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WIC PROGRAM FISCAL YEAR 1997 FOOD GRANT AS PERCENT OF FAIR SHARE—Continued

[As of January reallocation]

State agency	Fiscal year 1997—		(C) Food grant as percent of fairshare
	(A) Fairshare (w/ January realloca- tion)	(B) Food grant (w/January re- allocation)	
Wcd. Ent	728,060	1,031,163	141.63
Choctaw, OK	656,059	1,055,737	160.92
Cherokee	1,645,945	2,548,663	154.85
Chickasaw	466,193	991,406	212.66
Otoe-Missouria	204,314	293,654	143.73
Potawatomi	742,612	962,336	129.59
Zuni	753,814	455,032	60.36
ITC	94,428	166,947	176.80
Muscogee Creek	717,958	392,947	54.73
Sac and Fox	81,534	123,310	151.24
Osage Nation	140,716	378,575	269.03
Subtotal	397,731,389	350,146,343	88.04
MPRO:			
Colorado	26,367,512	26,985,269	102.34
Iowa	20,919,451	23,889,029	114.20
Kansas	23,069,359	20,866,397	90.45
Missouri	53,516,758	50,349,227	94.08
Montana	8,126,292	8,379,425	103.11
Nebraska	11,370,227	13,324,203	117.19
North Dakota	5,049,945	6,376,135	126.26
South Dakota	6,433,360	7,081,118	110.07
Utah	20,547,294	20,915,615	101.79
Wyoming	3,971,763	3,939,705	99.19
Shosh/Ara	209,417	371,012	177.16
Ute Mtn	110,576	68,783	62.20
NIITDC	123,352	329,258	266.93
Cheyenne River	145,784	394,345	270.50
Rosebud	294,625	692,908	235.18
Standing Rock	251,124	564,415	224.76
Three Affiliated	98,465	278,595	282.94
Subtotal	180,605,305	184,805,439	102.33
WRO:			
Alaska	10,178,281	11,051,964	108.58
Arizona	46,124,452	43,909,583	95.20
California	442,438,400	469,535,464	106.12
Guam	3,890,167	3,713,183	95.45
Hawaii	20,276,861	16,826,150	82.98
Idaho	12,212,021	12,050,207	98.67
Nevada	12,413,245	12,213,962	98.39
Oregon	26,884,995	31,160,478	115.90
Washington	45,888,198	58,231,142	126.90
ITCN	325,976	418,150	128.28
Navajo Nation	5,278,374	10,638,316	201.55
ITCA	4,372,907	3,605,828	82.46
American Samoa	3,482,896	3,339,913	95.89
Subtotal	633,766,774	676,694,340	106.77

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WIC PROGRAM FISCAL YEAR 1997 FOOD GRANT AS PERCENT OF FAIR SHARE—Continued

[As of January reallocation]

State agency	Fiscal year 1997—		(C) Food grant as percent of fairshare
	(A) Fairshare (w/ January reallocation)	(B) Food grant (w/January reallocation)	
National	2,792,372,972	2,792,372,972	100.00

Question. I understand that States are submitting to the Department detailed expenditure and participation plans based on current funding levels which reflect food cost data, cost containment initiatives, anticipated fiscal year 1996 and 1997 spend forward amounts and anticipated surpluses and shortfalls in funding levels. Please make this information available for the record.

Answer. WIC State agency fiscal year 1997 spending plans were received by the FCS from all WIC State agencies in February. An analysis of the spending plans, as well as the actual plans provided by each State agency, were provided to the Senate Appropriations Committee on March 18, 1997.

FISCAL YEAR 1998 WIC REQUEST

Question. A WIC contingency fund of \$100 million is requested for fiscal year 1998 to avoid participation reductions from unexpected food price increases. The Secretary would be authorized to release amounts from the contingency reserve "should food costs exceed budget estimates." What is the budget estimate which would be used as the "trigger" for the proposed reserve?

Answer. The contingency fund is intended to serve as a buffer against unforeseen conditions which could threaten the goal of supporting participation at a stable, full funding level. It is for use only if needed to avoid participation reductions from the full-funding level caused by higher-than-expected food costs. FCS believes it is important to provide this buffer as the program enters a period of greater funding stability. In the past, when WIC participation was increasing steadily each year, higher-than-expected food costs would have resulted in slower program growth. However, in the coming year, when participation is expected to be much more stable and many States will only have funds to support current participation, unanticipated inflation would mean actual reductions in service, rather than simply a reduction in the growth rate.

The Administration has not established a fixed technical approach for determining the circumstances under which contingency funds would be spent.

Question. Why does the budget propose that the requested contingency reserve funds remain available until expended?

Answer. The contingency reserve is intended to serve as a buffer against unforeseen conditions which could threaten the goal of supporting participation at a stable, full funding level, and would be used only if needed to avoid participation reductions from the full-funding level caused by higher-than-expected food costs. FCS believes that the need for such a buffer will remain beyond fiscal year 1998 as the program operates at a stable level. Furthermore, it is the Agency's best estimate that these funds will not be used in fiscal year 1998. It is requested that the budget authority for this fund remain available until expended, rather than periodically re-establishing the budget authority for such a fund, as would be required if the budget authority is granted for a fixed period.

Question. The "full funding" level is assumed to be approximately 7.5 million persons. Please provide the Committee with a detailed explanation of how this full participation estimate was produced.

Answer. The "Eligibility And Coverage Estimates 1995 Update—U.S. and Outlying Areas" is provided for the record.

[The information follows:]

SPECIAL SUPPLEMENTAL NUTRITION PROGRAM FOR WOMEN, INFANTS, AND CHILDREN (WIC)

ELIGIBILITY AND COVERAGE ESTIMATES 1995 UPDATE—U.S. AND OUTLYING AREAS

Overview

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) is a Federal-State nutrition and health assistance program for low-income

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childbearing women, infants and young children. To be eligible, an applicant must meet three basic criteria:

(1) *Categorical*—Participants must be pregnant women, breastfeeding women up to 1 year after delivery, non-breastfeeding postpartum women up to 6 months after delivery, infants up to 12 months of age, or children up to their fifth birthday.

(2) *Income*—The maximum income limit is 185 percent of the U.S. Poverty Guidelines (e.g., \$28,860 for a family of four as of July 1, 1996). In addition, individuals are automatically considered income-eligible if they receive benefits under the Federal Medicaid, Aid to Families with Dependent Children (AFDC), or Food Stamps Program (FSP). Income limits for the AFDC and FSP are below the WIC income cutoff; however, in some cases, Medicaid serves persons over 185 percent of poverty.

(3) *Nutritional Risk*—Participants must be certified to be at nutritional risk. Three major types of risk are recognized: *medically based* risk, such as anemia, underweight, maternal age, history of pregnancy complications or poor outcomes, etc., *diet-based* risk—inadequate dietary patterns, as determined by 24-hour food recall or food-frequency analysis, and *predisposing risk conditions*, such as homelessness and migrancy.

1995 ESTIMATE OF WIC ELIGIBLE

[Numbers in thousands]

	Pregnant women	Postpartum and breastfeeding women	Infants	Children	Total
1994:					
Income eligible	1,266	906	1,703	7,709	11,584
Fully eligible	1,156	832	1,618	5,797	9,403
Participation (CY)	682	842	1,796	3,298	6,618
Coverage (FY) (percent)	59	101	111	57	70
1995:					
Income eligible	1,300	931	1,748	7,313	11,292
Fully eligible	1,187	855	1,661	5,499	9,202
Participation (CY)	689	900	1,817	3,541	6,947
Coverage (CY) (percent)	58	105	109	64	75

The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (Public Law 104-193) replaced AFDC with the Temporary Assistance for Needy Families (TANF) program. TANF recipients will continue to be considered automatically income eligible for WIC as long as the income standards established by States for TANF are not less restrictive than those for AFDC.

Estimates of persons eligible for the WIC program are used for several purposes. They provide an indication of the number of persons who would participate in WIC if funds were available. As such, the eligibles estimates are an important component in developing program budget estimates used in the President's budget request and the Congressional budget process. Finally, the eligibles estimates provide a basis for estimating program coverage—that is, for determining what share of the eligible population the program is currently reaching. Based on the March 1996 Current Population Survey (CPS), FCS estimates that 9.2 million women, infants and children were fully eligible for the WIC Program in 1995, a 2.1 percent decrease from the number estimated eligible in 1994. A total of 11.3 million women, infants and children fell below the WIC income eligibility limit in 1995, vs. an estimated 11.6 million in 1994.

Program Coverage

The decrease in the estimated number of WIC income-eligibles, combined with an increase in average monthly participation of over 300,000 for the calendar year, allowed overall program coverage to increase by five percentage points, from 70 percent in 1994 to 75 percent in 1995. This coverage estimate does not factor in increases in participation that have occurred since 1995.

Estimated coverage of pregnant women is approximately 58 percent for 1995. This represents the proportion of women at all stages of pregnancy who are participating in WIC. Because women are very unlikely to participate in WIC for a full 40 weeks of pregnancy, this rate should be expected to be significantly below 100 percent. For example, if all eligible pregnant women were to participate for six months of their pregnancy, the calculated participation rate would equal 65 percent.

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Estimated coverage rates for infants and breastfeeding/postpartum women were over 100 percent in 1995. These extremely high coverage rates are likely attributable to some disparities between the methodology used to estimate income-eligibles and the certification practices in the WIC program, as well as the imprecision inherent in any survey-based estimate. However, these data do strongly suggest that the program has likely achieved virtually full coverage of persons in this category at the national level. Estimated coverage of children also rose substantially from 1994 to 1995, from 57 percent to 64 percent.

The estimate of 9.2 million WIC eligible persons in 1995 assumes that about 4 out of 5 income eligible persons are also at nutritional risk and thus fully eligible for the WIC Program. The estimates of pregnant, postpartum and breastfeeding women are based on the count of infants from the CPS and relationships found in the 1990 Decennial Census.

WIC Full Participation

The President's Budget proposes to fully fund the WIC Program and serve 7.5 million women, infants, and children by the end of fiscal year 1998. The full funding participation level, providing adequate funding to serve all eligible persons who would chose to participate in WIC, has been assumed to be approximately 7.5 million persons for budget purposes for the past several years. This target was originally based on a budget estimate prepared in 1993 by the Congressional Budget Office. It is also consistent with FCS' full participation estimate produced in 1996 using 1994 WIC eligibles data.

Using the same methodology as was used for last year's full participation estimates, the 1995 eligibles data would imply that 7.3 million persons would participate in the program if adequate funds were available. This methodology assumes that, on average, approximately 80 percent of all persons fully-eligible for the program would participate.¹

This key assumption regarding the overall maximum participation rate is not exact and now appears somewhat low. First, year-end fiscal year 1996 participation was approximately 100,000 greater than the 7.3 million level calculated by the model. This alone indicates that the 80 percent participation rate assumption understates the actual participation rate. Indeed, the program has a goal of increasing participation rates and has been successful in achieving high participation rates for infants and women. The key variable in determining overall program participation rates is the participation rate among children. The strong and steady participation growth that occurred among children in WIC throughout fiscal year 1996 suggests that a 80 percent maximum participation rate for the program is likely too low. The conclusion that the 80 percent participation assumption is too low is further supported by the experience of the Food Stamp Program, where participation rates for families with children under 5 are over 90 percent.

The 7.5 million full funding participation target is slightly above the full participation level estimated based on 1995 CPS data using previous methods. Given that the estimated number of fully-eligible persons exceeds this level and the actual participation experience of WIC and other low-income assistance programs serving children, a full funding participation target for fiscal year 1998 of 7.5 million is reasonable and prudent.

Question. Based on your estimates, administrative expenses represent approximately 26 percent of the average cost of a WIC food package. Of this amount, what portion is for administrative program costs and what portion is for nutrition services?

Answer. The latest nutrition services and administration (NSA) expenditure data available is for fiscal year 1995. This data shows that 74 percent of total expenditures were for supplemental foods and 26 percent of total expenditures were for NSA. NSA refers not only to program management costs, but to all costs other than the cost of the supplemental foods. Only 9 percent of total expenditures were for program management. This amount includes the cost to authorize and monitor vendors to accept WIC food instruments; printing, reconciling and payment of food instruments; development and management of ADP systems; accounting, reporting, and auditing; and outreach. Nutrition education and breastfeeding promotion and support were 6 percent of total expenditures. These services include the preparation and provision of education sessions (group or individual) on nutrition and breastfeeding promotion and support; peer counseling support for breastfeeding mothers; breastfeeding aids such as breast pumps; equipment and materials for nutrition education; and interpreter or translator services to facilitate nutrition edu-

¹ This estimate also assumes that a portion of the WIC-eligible population (approximately 65,000 persons) would continue to be served by the Commodity Supplemental Food Program.

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cation. The remaining 11 percent of total expenditures were for other client services. These services include diet and health assessments for certification; issuance and explanation of food instruments; referrals to other health and social services; voter registration activities; other coordination efforts, such as immunization promotion and drug, alcohol and tobacco education; and coordination with other family and child health and social programs.

Question. The fiscal year 1998 budget also requests appropriations bill language authorizing the Secretary to adjust fiscal year 1998 state allocations to reflect food funds spent forward, and to make other funding formula revisions.

Please provide a detailed explanation of the revisions which would be made to the current regulatory formula, the reasons for each revision, and a comparison of the allocation each state would receive under the revised versus the current regulatory formula.

Answer. The Department is requesting legislative language authorizing the Secretary to adjust the funds allocation process in fiscal year 1998. The first adjustment would require the Secretary to reduce each State agency's allocation for fiscal year 1998 appropriated funds by the amount of food funds that the State chooses to spend forward from fiscal year 1997. This will provide the Department with the ability to reallocate a greater amount of funds to States most in need. The second change pertains to the allocation of fiscal year 1997 funds that are recovered from the States. To the extent funds are available, funds would be allocated to all States to maintain the level of funding received in fiscal year 1997, adjusted based on inflation. Any additional funds would be allocated to under fair share States that the Secretary has determined can effectively utilize and manage additional funds. Under fair share States are those States that are not receiving funds commensurate with their percent of the total WIC population.

A comparison of the allocation each State would receive under the revised formula can not be provided at this time. Additionally, the Agency is unable to determine which States will be under fair share and would be eligible to receive additional funds. However, FCS provided a list of fair share grants and food grants as of January 1997, in answer to your previous question. These give a sense of where States are with respect to fair shares to date.

Question. You indicated that the Department plans to proceed with a regulatory change so that the requested appropriations bill language would provide only interim authority. When does the Administration plan to publish a proposed rule?

Answer. The Department plans to revise the current food funding formula in consultation with WIC State agencies. The Agency envisions that the proposed rule would be published in fiscal year 1998.

INFANT FORMULA REBATES

Question. What savings have been generated from competitive bidding by States for the purchase of infant formula for WIC participants in each of fiscal years 1995 through 1997? How many participants have been funded as a result of this savings in each of these years?

Answer. Infant formula rebates reduce the cost of infant formula, thereby allowing additional participants to be served monthly. The requested information is provided for the record; however, the rebates listed include rebate savings for other foods, e.g., infant cereal, but infant formula rebates represent the vast majority of rebates.

[The information follows:]

[Dollars in thousands]

Fiscal year	Rebates	Estimated participation increase due to rebate savings
1995	\$1,051,000	1,620,000
1996	¹ 1,180,000	1,790,000
1997 ²	1,172,000	1,720,000

¹ Rebates reported by State agencies as of 2/24/97.

² Estimated rebates from infant formula only.

Question. How successful have efforts been to promote breastfeeding as the feeding method of choice among WIC participants? What impact does this have on savings from infant formula rebates?

Answer. FCS believes that WIC's efforts to promote breastfeeding as the feeding method of choice for all mothers, particularly among WIC participants is having an

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impact. Proprietary marketing data from the Ross Laboratories Mothers Survey is the most recent source of breastfeeding data available at this time. The Ross data as well as other information suggest that WIC breastfeeding rates are growing, and are growing at a faster rate than among non-participants. For example, the Ross data showed that between 1989, when Congress enacted several provisions to strengthen WIC's support for breastfeeding, and 1994, the percentage of WIC mothers breastfeeding in the hospital increased from 34 to 44 percent, while the percentage of non-WIC mothers breastfeeding in the hospital rose from 63 to 69 percent. This is an increase of ten percentage points for WIC mothers compared to six percentage points for non-WIC mothers. The 1993 General Accounting Office (GAO) report to Congress entitled *Breastfeeding-WIC's Efforts to Promote Breastfeeding Have Increased* provides additional encouraging information. The GAO report indicated that between 1989 and 1992, in-hospital breastfeeding among WIC participants increased nearly 12 percent. The percentage increase in the breastfeeding rate of WIC participants was more than twice the 5 point increase of other women in the hospital. The Agency believes that substantial efforts directed at improving breastfeeding rates in WIC by Federal, State and local personnel are responsible for the encouraging trend exemplified in these data.

Infant formula rebates serve to reduce the net cost of infant formula to the program. If a breastfed infant receives no formula, or less formula than he/she would otherwise have received, program expenditures are reduced by the net cost of the formula that would otherwise have been provided. However, there are additional costs associated with serving the breastfeeding mother, as the food package provided to breastfeeding women is almost as large as the package provided to those using infant formula. Breastfeeding women can participate for up to a year, whereas non-breastfeeding postpartum women are eligible for up to six months while they also receive formula for their infant. In effect, it is possible but unlikely that significant increase in the incidence and duration of breastfeeding may increase overall program costs even as the cost of infant formula is further reduced. In any case, the promotion of breastfeeding in the WIC program is a priority for health rather than cost considerations.

CHILD IMMUNIZATION

Question. Please give us a status report on how successfully the WIC program has been utilized to increase child immunizations. What level of funding is being spent on this in 1997? What is proposed for fiscal year 1998?

Answer. The WIC Program has been and will continue to be a major contributor to the current high levels of immunization coverage among low income children in the United States. In fact, the Centers for Disease Control and Prevention (CDC) considers the WIC program to be one of its most important allies in raising and maintaining immunization coverage rates. Of the 87 WIC State agencies (including territories and Indian Tribal Organizations), all are currently actively involved with immunization promotion activities. These range from comprehensive immunization screening procedures and media campaigns to providing incentives and sending immunization reminders to clients.

WIC agencies provide direct ongoing administrative support for immunization promotion efforts. Allowable WIC expenditures which can be covered by WIC program Nutrition Services and Administrative funding include activities such as immunization education, outreach, assessment of immunization status (which ranges from manual to computerized assessment), referral and follow up. WIC agencies develop cost allocation agreements to fairly share costs of immunization promotion activities with CDC and other sources of support for immunization. The amount of WIC funds spent on immunization activities is unknown because State WIC agencies are not required to report on this type of expenditure. As technical assistance to WIC State agencies, CDC is developing a new methodology for calculating the costs of WIC immunization activities which may provide a tool for estimating WIC immunization expenditures in the future.

CDC has contributed funds directly to WIC to meet mutual immunization goals. In 1995, Congress directed CDC to ensure that all grantees receiving Immunization Action Plan (IAP) funds reserve 10 percent of those funds for the purpose of funding immunization assessment and referral services in WIC sites. Immunization grantees must use the funds for WIC linkages unless the grantee can document that assessment and referral are taking place in WIC sites without the need for specific funds. This amounted to approximately \$10 million in both fiscal years 1996 and 1997. Future year funding from CDC is unknown at this time.

In fiscal year 1996 approximately \$1 million of CDC funding was provided to nine WIC State agencies to design, develop, and implement information system linkages

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between State Immunization Information Systems and WIC data systems at State and local agency levels.

CAP ON SUGAR IN WIC-APPROVED BREAKFAST CEREALS

Question. In its hearings last year and in the report on the fiscal year 1997 appropriations act, this Committee expressed concerns about the Department's effort to revisit the limitation on the sugar content of WIC-approved cereals. Specifically, we recalled that the WIC sugar cap has been examined by the Department on a least seven prior occasions, each of which resulted in a confirmation of the cap at its current level (6 grams of sugar per ounce). We also expressed our sense that, unless there is new evidence that this particular nutrition standard requires further study, the Department's effort may represent an inefficient use of limited resources.

We understand that despite full consideration of the Department's Notice of Intent to Propose Rulemaking, with significant participation in the public comment opportunity, this matter stands unresolved.

Are there any new developments in the underlying research that would prevent a resolution of this issue?

Answer. Since the time that the Department conducted its last review of WIC food packages, the 1995 Dietary Guidelines were issued. That, in combination with the fact that recent studies continue to fail to document an association between sugar consumption and an increased risk of certain diseases and medical conditions, prompted the Department in March of 1996 to seek public opinion on the continued appropriateness of the current regulatory sugar caps for WIC cereals. While commenters were generally very supportive of retaining the current cap, some suggested that the Department should undertake a more comprehensive review of packages, rather than just considering the sugar content of cereals. In response, the Department intends to publish another Federal Register notice announcing specific future intentions regarding this new review.

In the interim, the Department is taking no action to propose changes in current WIC regulations.

Question. What was the outcome of comments the Department received?

Answer. At the close of the 90-day comment period on the WIC Cereal Sugar Limit Notice published in the Federal Register on March 18, 1996, the Department received 731 letters from a total of 878 commenters, representing a wide range of interested parties. Eight hundred and nine commenters expressed support for retaining the 6-gram sugar limit unchanged, 27 commenters recommended that the limit be redefined to discount naturally occurring sugars found in grain and fruit ingredients in cereals, 26 commenters favored an elimination of the sugar limit, 7 commenters suggested that USDA establish a lower sugar limit, and 11 commenters expressed other points of view. (A few commenters expressed two positions in their letters, which were captured accordingly in the counts reported above.)

As of March 13, 1997, 164 letters, representing 182 commenters, were received after the closing date for the notice's comment period. Although late letters were read and considered, they were not included among the official counts comprising the comment analysis stated above. Of these, 156 commenters supported retaining the sugar limit unchanged, while the remaining 26 comments took other positions.

NUTRITION EDUCATION TRAINING (NET) PROGRAM FISCAL YEAR 1997 SUPPLEMENTAL FUNDING REQUEST

Question. The Administration's fiscal year 1997 supplemental/rescission package includes legislative language to shift to the NET program \$6.25 million in food stamp funding for commodity purchases of The Emergency Food Assistance Program (TEFAP).

Given the fact that grants to states are available through the school meals initiative and you have reprogrammed funds to make available \$3.75 million in fiscal year 1996 funding for the Nutrition Education and Training (NET) Program, why is it a priority to provide additional supplemental funding for the NET program?

Answer. Through Team Nutrition, the program that supports implementation of the School Meals Initiative for Healthy Children, grants are offered to State agencies on a competitive basis. These grants provide money to establish or enhance training programs for school food service personnel to enable local school districts to provide healthy meals to children and to meet the USDA nutrition requirements. In 1996, 17 States were awarded Team Nutrition Training Grants for School Meals for a total funding of \$2,710,920.

The Nutrition Education and Training Program (NET), in contrast, provides grants to all States. Under the legislative mandate NET provides: (1) instruction to educators to enable them to impart nutrition education to children and parents; (2)

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instruction in basic nutrition, as well as food service management training, to school food service personnel; and (3) funds for educational materials development for use with these audiences.

NET provides ongoing nutrition education and food service training support to the Child Nutrition Programs. With \$3.75 million reprogrammed to fund NET activities in fiscal year 1997, funds were divided equally among all States at a level of \$66,951 to make it feasible to keep the Program in operation in every State. This amount is less than the current legislated minimum NET grant of \$75,000, an amount needed to support the service delivery infrastructure, i.e., in-service training for teachers through community colleges; lending resource centers for instructional materials; mini-grants to local schools, that can meet minimum obligations to each program audience. The minimum grant currently applies in 20 States with relatively low numbers of children enrolled in schools and child care institutions. NET funds are allocated based on enrollment figures obtained annually from the Department of Education.

The \$66,951, then, severely underfunds States with higher enrollments, hindering their ability to adequately meet the needs in their States for nutrition education and training. Some of these needs are continuous as new teachers, food service personnel, and children enter the school system each year. Knowledge and skills of educators and food service personnel must be updated as new information in food and nutrition becomes available. NET has a vital role in the implementation of the current activities in the Team Nutrition initiative.

WIC FARMERS' MARKET NUTRITION PROGRAM

Question. The fiscal year 1998 request proposes to increase funding for the WIC Farmers' Market Nutrition Program from \$6.75 to \$12 million.

How many state agencies and Indian tribal organizations are currently participating in this program? Please identify the number of farmers' markets by State and Indian tribal organization supported by this program and indicate the amount of funds being allocated for each.

Answer. Thirty State agencies (including 2 Indian tribal organizations) are currently participating in the program. A chart is provided for the record that shows the number of farmers' markets and current grant amounts for fiscal year 1997 by State agency.

[The information follows:]

	Fiscal year 1997 Federal grant	Number of mar- kets
California	\$150,102	47
Chickasaw, OK	40,000	5
Connecticut	261,810	45
District of Columbia	145,760	6
Illinois	104,097	8
Indiana	32,897	11
Iowa	368,697	69
Kentucky	77,119	22
Maine	92,568	34
Maryland	175,427	45
Massachusetts	472,311	89
Michigan	271,208	68
Minnesota	183,345	14
Missouri	31,173	3
MS Choctaw	10,121	1
N. Carolina	111,378	18
New Hampshire	85,003	25
New Jersey	136,727	99
New Mexico	75,000	7
New York	1,443,901	185
Ohio	95,582	29
Oregon	55,114	8
Pennsylvania	676,891	270
Rhode Island	81,153	6
S. Carolina	99,778	21

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	Fiscal year 1997 Federal grant	Number of mar- kets
Texas	936,863	44
Vermont	74,676	27
Washington	135,230	18
West Virginia	68,015	10
Wisconsin	233,054	13
Undistributed funds ¹	25,000	.....
Total	6,750,000	1,247

¹These are funds that were initially allocated for Cherokee, Oklahoma which has since withdrawn from the program. The funds remain undistributed due to current FMNP funding restrictions.

Question. Which states or Indian tribal organizations have expressed interest in beginning programs? Which states or Indian tribal organizations have made requests to expand their programs?

Answer. Colorado, Florida, Idaho, Mississippi, Montana, Nebraska, Georgia and Utah have expressed interest in beginning programs. Additionally, Georgia has submitted an approved State Plan to participate, positioning it as the first of the interested States to be funded if additional funding is made available. The following participating State agencies have requested expansion funds for fiscal year 1997: California, Indiana, Iowa, Kentucky, Michigan, Minnesota, Missouri, Mississippi, Choctaw, New York, North Carolina, Ohio, Oregon, Pennsylvania, Rhode Island and West Virginia.

Question. How would the additional \$5.25 million requested for fiscal year 1998 be allocated? Please provide a breakdown by state/Indian tribal organization.

Answer. By law, the first priority for these funds is to restore State agencies to their previous year's funding level. Of the remaining funds, 75 percent would be allocated to currently participating State agencies that request expansion funding. A funding formula, designed by the Department in consultation with State agencies, is used to distribute expansion. Basically, this formula ranks State agencies according to their previous year's average FMNP grant per WIC participant. Expansion requests are funded in rank order, beginning with the State agency with the lowest FMNP grant per participant. The remaining 25 percent would be allocated to new State agencies that are seeking to initiate a WIC Farmers' Market Nutrition Program (FMNP). A ranking process, based on factors specified in the law, is used to allocate funds to new State agencies. The law requires allocation on the basis of factors such as prior experience with a similar program, State plans that have the greatest access to farmers' markets, the highest concentration of eligible persons and such other factors as determined appropriate by the Department.

Because fiscal year 1998 State Plans, which are the vehicle for requesting expansion or new funding, are not due until November 30, 1997, FCS cannot provide a specific breakdown of the allocation of the \$5.25 million by State/Indian tribal organization at this time. FCS can, however, identify the States that have expressed interest in initiating the FMNP. The following States have expressed an interest in participation in the FMNP: Colorado, Florida, Georgia, Idaho, Mississippi, Montana, Nebraska and Utah.

Question. How many farmers are currently participating in this program? How many WIC participants?

Answer. Preliminary data indicate that in fiscal year 1996 there were 8,239 farmers representing 1,231 farmers' markets participating in the program. Additionally, there were 991,121 WIC participants enrolled in the Program.

Question. What are the Department's latest findings with respect to the significant benefits of this program to farmers and to WIC participants? How are these benefits measured?

Answer. The Department has not conducted a formal evaluation of the WIC Farmers' Market Nutrition Program (FMNP) since 1989 when the program was still in its pilot phase. As such, a conclusion must be drawn regarding the benefits of the program from informal survey data that are provided by each State agency.

Based on the most recent survey data available, reflecting fiscal year 1995 program operations, 51 percent of recipients who responded to the survey said they had never been to a farmers' market before taking part in the FMNP. In addition, 77 percent said they planned to eat more fruits and vegetables all year round and 89 percent said the quality of the fresh produce at farmers' markets was as good as or better than at their grocery stores.

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Regarding farmers who responded to the survey, 84 percent said that the FMNP increased their sales. In addition, 35 percent reported increased fruit/vegetable production and 32 percent stated that they plan to grow a wider variety of fruits or vegetables next year because of their involvement in the FMNP.

COMMODITY ASSISTANCE PROGRAM

Question. Beginning in fiscal year 1996, funding for the Commodity Supplemental Food Program, Soup Kitchens, and The Emergency Food Assistance Program was merged into a Commodity Assistance Program. The fiscal year 1998 President's budget proposes to add to the Commodity Assistance Program funding for the Nutrition Program for the Elderly and Pacific Island Assistance.

In its fiscal year 1997 report, the Committee encouraged the Department "to distribute the commodity assistance program funds more equitably among States, based on an assessment of the needs and priorities of each State, and the State's preference to receive commodity allocations" through each of the programs funded through the commodity assistance program account. Are you doing this? If not, why?

Answer. Of the \$166 million appropriated to this account for fiscal year 1997, the Department exercised discretion granted in the appropriations act to provide \$76 million, the amount requested in the President's budget, to the Commodity Supplemental Food Program (CSFP). The remaining \$90 million has been made available for the Emergency Food Assistance Program (TEFAP) administrative grants and commodity purchases. (TEFAP and the Soup Kitchens/Food Banks Program (SK/FB) were separate programs at the time of the appropriation, but SK/FB was absorbed by TEFAP under the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (Public Law 104-193) enacted two weeks later.) States have been given the discretion to request that all or any portion of their administrative grants be used instead to provide commodities. They also have full discretion to determine how to divide their TEFAP commodities between congregate meal service and household distribution.

The Department did not implement the Committee's suggestion because such action might have caused severe reductions in CSFP services in many of the 18 States and two Indian Tribal Organizations administering the program. The benefits in this program are well targeted to at-risk population groups, and the program delivers these benefits efficiently and effectively. In contrast to the extremely disruptive impact Nationwide dispersal of resources would have in areas where the program currently operates, such action would not provide the other States with a significant increase in resources. Moreover, the funding for TEFAP commodity purchases increased by \$100,000,000 in fiscal year 1997 by the enactment of Public Law 104-193. This increase in TEFAP funding was another reason for allocating CSFP funding in accordance with the Administration's fiscal year 1997 budget request.

Question. One of the programs funded under the commodity assistance program—the Commodity Supplemental Food Program—serves a very limited number of states. Are all states now allowed to receive funding under this program, or, conversely, to receive more soup kitchen/emergency food assistance funding if they elect not to participate in the Commodity Supplemental Food Program? If not, why?

Answer. The Department chose to devote \$76 million, the amount requested in the President's budget, to the CSFP. This funding was intended to maintain the program in the areas where it currently operates. CSFP funding was not increased beyond the budget request to support expansion of the program into other States, nor was program funding reduced to compensate States which do not currently administer the CSFP.

Question. If the Department is not giving states flexibility in receiving commodity assistance program funds but instead maintaining separate funding streams for the individual programs funded through this account, why is the Department not asking to restore separate appropriations for each of these programs rather than merge more programs into this account?

Answer. While the Department is maintaining separate funding for these programs included in this account, the merging of these programs in this manner maintains their discretionary status while simplifying the budget presentation.

Question. Most states do not opt for commodity assistance under the Nutrition Program for the Elderly program. They instead elect to receive a cash reimbursement for each meal served. Why is the Administration proposing to merge this program, which for the most part does not provide commodity assistance, with the Department's commodity assistance programs?

Answer. The Nutrition Program for the Elderly (NPE) provides States with the flexibility to receive commodities and/or cash. Since the States have the option to receive commodities, both entitlement and bonus, the program has always been clas-

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sified as a commodity program. In fiscal year 1996, nearly one third of the States elected to receive some level of their NPE entitlement in the form of commodities.

Question. The Administration proposed last year that funding for the Nutrition Program for the Elderly be transferred to the Department of Health and Human Services (DHSS). Does the Administration no longer believe that this program should be managed by the DHHS in conjunction with other elderly feeding programs? Why?

Answer. Unlike the other commodity programs, the Older Americans Act, which authorizes the Nutrition Program for the Elderly (NPE), expired last year. The Administration has determined that the better avenue for considering the transfer of NPE to the Department of Health and Human Services is through the reauthorization process. The Agency still believes that the recipients would be best served if NPE were combined and administered by HHS, since HHS' portion of the funding for the program is about 3 times greater than USDA's, and one set of rules would be easier to follow than two.

Question. What has been the decline in WIC-type participation in the Commodity Supplemental Food Program as eligibles shift into the WIC program in each of the last five fiscal years? Why not reduce funding for the Commodity Supplemental Food Program as eligibles shift into the WIC program?

Answer. Prior to fiscal year 1995, the number of women, infants, and children (WIC) participating in the Commodity Supplemental Food Program (CSFP) increased each year. In fiscal years 1995 and 1996 the number of WIC participants decreased by 36,315 and 26,761 respectively. Based on participation to date, it is estimated that the number of WIC participants will decrease by 8,744 in fiscal year 1997.

The Department does not request reduced funding for the CSFP as the participation of WIC declines because the CSFP provides an efficient and effective service to its low-income elderly participants as well. Whereas many women, infants, and children have WIC as an option to the CSFP, no such clear alternative or equivalent program exists for the elderly.

It should be noted that the elderly prefer participation in CSFP for various reasons. One primary reason is that the application process is much simpler than for other programs, such as food stamps and SSI. Moreover, the commodity distribution sites are sometimes more conveniently located than stores and for the homebound elderly, the commodities are taken directly to them. Lastly, participants report liking the types of commodities distributed. Therefore, funding not required to support women, infants, and children should be retained for service to the elderly.

Question. Although the fiscal year 1998 budget proposes a reduction in elderly participation in the Commodity Supplemental Food Program, the program's elderly population has increased over the past years. What assistance is provided to the elderly through this program which cannot be provided to this population through other federal food assistance programs?

Answer. Like child bearing women, infants and young children (the other populations served by the Commodity Supplemental Food Program (CSFP)), the elderly have special nutrient needs. The CSFP is designed to provide a nutrient dense food package to supplement the nutrient intake from other sources. CSFP is well-suited to the needs of the elderly for several reasons. Some CSFP sites deliver the commodities to the elderly person's home or centralized centers where the elderly, who often have transportation problems, are able to receive the assistance. In addition, anecdotal evidence suggests that the elderly associate programs such as the Food Stamp Program (FSP) with charity and therefore underutilize the program while viewing CSFP as acceptable assistance. In fiscal year 1994, only 35 percent of elderly eligible for the FSP participated in the program; the overall participation rate for all ages of eligibles in the FSP was 71 percent.

FOOD PROGRAM ADMINISTRATION

Question. The prepared testimony indicated that restrictive staff year ceilings in the Food Stamp and Child Nutrition accounts and limited appropriations have enabled you only to "deploy staff from crisis to crisis, which is making continuous, effective program administration nearly impossible."

How have staff year ceilings in the Food Stamp and Child Nutrition accounts and appropriations limitations affected the agency's staff? What has been the impact of staffing reductions on the Department's ability to properly administer and oversee these programs?

Answer. Since fiscal year 1995, FCS has had to reduce its staff by 60 to 80 staff years every fiscal year due to funding reductions in the Food Program Administration (FPA) account. Although the Agency is committed to the National Performance

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Review and the Vice President's goals of reducing the Federal workforce and FCS has been diligent in implementing efficiencies, the Agency believes that the cuts have been very deep. FCS reached its fiscal year 1999 streamlining target 3 years ago. Restrictive staff year ceilings in the Food Stamp and Child Nutrition accounts have made the Agency inflexible in its ability to shift staff to changing priority areas, such as program oversight. Due to the ceilings, increased focus on areas needing attention, such as program integrity and providing technical assistance to State agencies, cannot be properly staffed by the Food Stamp or Child Nutrition accounts where the effort is most vital. This has had a significant impact on the Agency's ability to carry out its mission.

Staff restrictions and reductions have also affected the Agency's ability to properly monitor and oversee everyday activities of FCS programs. Due to funding reductions, FCS has curtailed new travel that is crucial to monitoring sites and maintaining Federal presence in the field. Staffing reductions have placed highly labor-intensive activities, such as store investigations and maintaining program integrity at risk. Federal on-site management reviews are critical to the proper administration of Child Nutrition Programs. These reviews reveal administrative and operational problems at early stages. Additionally, external audits from GAO and OIG have consistently cited insufficient staff to exert proper oversight of State administrative costs and debt management practices.

The reductions in staff also affects the Agency's ability to respond to program changes. Implementing new legislation, such as Welfare Reform, the Healthy Meals for Healthy Americans Act, and the Government Performance and Results Act, impose significant, new, and ongoing administrative burdens on FCS. These new laws effect comprehensive program changes and are extremely important to our programs, but they are not receiving the full attention they deserve due to staff limitations and other demands. Agency workload has dramatically increased due to new legislation, several Department-wide initiatives, and the fact that our programs have tripled in size and complexity since 1980. There is not enough staff to handle the increased workload or proactively respond to problems to head off a crisis, all of which is having an adverse affect on morale.

The fiscal year 1998 budget requests a minimal increase to fund mandatory pay increases to support existing staff. Mandatory pay raises increase the cost of each staff year every fiscal year, requiring small increases in the FPA appropriation just to support existing staff. The cost of funding additional staff in the FPA appropriation or increasing the staff year ceilings in the Food Stamp and Child Nutrition accounts is millions of dollars less than the cost of increased fraud and abuse in our programs. The small amount of funding it will take to support our staff will provide programs that truly help those less fortunate, that respond appropriately and effectively to new needs and changing legislation, and that operate efficiently with savings to the taxpayer.

Question. The prepared testimony indicates that the fiscal year 1998 request includes no funds to update the agency's automated infrastructure which demands attention. What improvements are needed and how much is needed to address this problem?

Answer. The FCS began its Agency Infrastructure Modernization (AIM) in fiscal year 1996. By that time, much of the Agency's computer infrastructure had aged to the point where it had exceeded its life expectancy. In fiscal years 1996 and 1997 the Agency was able to replace much of its antiquated microcomputer hardware and software base. However, FCS still needs to upgrade over 400 microcomputers. Also, the Agency's file servers, network operating systems, wiring plant, certain standard software and advance application hardware and software are in need of modernization. Additionally, the Agency has only been able to make limited progress in Internet and Intranet applications.

The Agency's infrastructure modernization plan calls for the development or upgrade of these hardware and software tools in order to ensure a productive work environment for its employees. The plan is designed to upgrade all of this hardware and software by fiscal year 2001, pending the availability of resources.

The estimated cost for fiscal year 1998 is \$4,000,000 which is currently unfunded. These funds would be used to complete the microcomputer modernization, upgrade the Agency's file servers, network operating systems and wiring plants at headquarters and seven regional offices, and provide end-user and technical training in the new standard software. Additional infrastructure areas that require modernization are planned for fiscal years 1999 through 2001. These areas will need to be funded during those fiscal years.

Question. The fiscal year 1998 request for the Center for Nutrition Policy (CNPP) and Promotion is \$2.49 million. The budget indicates that an additional \$252,000

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is needed above the fiscal year 1997 level to support "unfunded staff." What do you mean by this?

Answer. In fiscal year 1996, the Center for Nutrition Policy and Promotion (CNPP) was allocated \$2,499,000 for salaries and expenses from the FPA appropriation. For fiscal year 1998, CNPP is requesting the same amount to fully fund current staff needs. CNPP believes, that at a minimum, it must have a critical core of 34 FTE's, mostly senior nutritionists and economists, to fulfill its mission and produce high quality nutrition policy analysis and deliver state-of-the-art nutrition education. This critical core staff is even more essential in fiscal year 1998 as CNPP is expected to provide most of the staff support for the Dietary Guidelines 2000. By tradition, USDA and the Department of Health and Human Services (DHHS) have rotated responsibility for staff and production costs incurred in producing the Dietary Guidelines. For the Fifth Edition of the Dietary Guidelines, due in the year 2000, USDA is responsible for staffing and production costs, most of which are expected to be provided by CNPP. In fiscal year 1997, CNPP is operating below its critical core need. In fiscal year 1998, CNPP needs to restore its resources to the critical core staff necessary for CNPP to fulfill its mission and produce the Dietary Guidelines 2000.

KENTUCKY-IOWA FOOD DEMONSTRATION PROJECTS

Question. Would you please provide a summary report on the Kentucky-Iowa food demonstration projects?

Answer. Since fiscal year 1989, Kentucky and Iowa have operated a demonstration project which allows for-profit child care centers to participate in the Child and Adult Care Food Program (CACFP) if 25 percent or more of their enrollment qualifies for free or reduced price lunch under the Income Eligibility Guidelines. Normally, for-profit centers can only participate in CACFP if at least 25 percent of their enrollment or licensed capacity is subsidized with Title XX child care funds.

Through fiscal year 1994, the centers participating in this demonstration project were treated as regular CACFP centers for funding purposes. Beginning in fiscal year 1995, the funding for the demonstration was classified as discretionary. A total of \$3.7 million was apportioned for the demonstration for fiscal year 1995 and is set to remain at that amount through fiscal year 1998.

The number of for-profit centers participating in the demonstration project in Kentucky increased from 77 centers in 1991 to 247 centers at the end of fiscal year 1994. Almost 90 percent of the participating centers would not have been eligible to participate in the CACFP due to the small number of Title XX beneficiaries attending these centers. The number of participating centers has declined slightly since that time as a result of the funding constraints established when the demonstration projects were classified as discretionary.

In Iowa, there was no significant increase in the number of for-profit centers participating in the demonstration project. There were six centers participating in fiscal year 1991 and 10 by the end of fiscal year 1994. Of these centers, 60 percent had sufficient Title XX beneficiaries to meet the regulatory requirements for participating in the CACFP.

During fiscal year 1996 there was an average of 180 sponsors, 170 in Kentucky and 10 in Iowa, and 228 centers, 218 in Kentucky and 10 in Iowa, approved for participation in the demonstration project. Enrollment in centers participating in the project averaged 13,696 in Kentucky and 688 in Iowa. A total of 1.6 million breakfasts, 2.0 million lunches, 1.0 million suppers, and 2.5 million snacks were served under the demonstration projects during fiscal year 1996.

SCHOOL MEALS INITIATIVE/TEAM NUTRITION

Question. For fiscal year 1997, \$10 million was provided for the school meals initiative. Of this amount, \$4 million was provided for food service training grants to states; \$2.5 million for in-school education materials; \$2.3 million for technical assistance materials; \$800,000 for cooperative agreements with the National Food Service Management Institute (NFSMI) for food service; and \$400,000 for print and electronic food service resource systems.

The Department reprogrammed \$3.75 million of the fiscal year 1997 funds provided for the school meals initiative to the Nutrition Education Program. The Committee was notified that no reduction would be made in the funds made available for food service training grants to states or for cooperative agreements with the NFSMI. Please explain from which other funded activities this \$3.75 million was taken and why the activities for which funding was reduced were considered to be of lowest priority.

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Answer. That information is provided for the record. All fiscal year 1997 Schools Meals Initiative funding for nutrition education along with part of the training and technical assistance funding was used to support NET activities. The specific nutrition education activities not funded included the printing and distribution of Spanish translations of existing Team Nutrition materials. This funding reduction also slowed the developmental process for the middle school materials, since the Agency had to rethink the method for transmitting the nutrition education messages to this audience given the reduction in funding for this activity. The Agency was unable to follow through with all of our commitments to the Team Nutrition Schools. Currently fiscal year 1996 carry-over funds are being used for other nutrition education activities while we await fiscal year 1998 funds.

The funding reduction for food service training and technical assistance prevented us from printing and distributing training and technical assistance support materials promised to program administrators. The Agency plans to fund these projects with fiscal year 1998 appropriations.

[The information follows:]

School Meals Initiative: Activities Not Funded

	<i>Fiscal year 1997</i>
I. Children's Education Resources, In-School Education Materials ..	\$2,500,000
II. Food Service Training and Technical Assistance, Technical Assistance Materials	1,250,000
Total	3,750,000

Question. The explanatory notes indicate that \$11.867 million is available for the school meals initiative. This would mean that \$7.6 million in funds provided in previous fiscal years have been carried over and are available for fiscal year 1997. For which specific activities is this additional \$7.6 million being made available?

Answer. The amount carried over from fiscal year 1996 and being made available for fiscal year 1997 has been revised to \$5,590,377. This amount is being used to fund six School Meals Initiative activities.

[The information follows:]

Children's Educational Resources	\$3,398,377
Mass Communication	75,000
Public-Private Partnerships	230,000
Technical Assistance Materials	1,000,000
National Food Service Management Institute	250,000
Evaluation/Administration	637,000
Total	5,590,377

Question. The fiscal year 1998 request for the school meals initiative is \$10 million. Please provide a detailed breakdown of this request, indicating the specific activities which would be funded—food service training grants to states; technical assistance materials; cooperative agreements with the National Food Service Management Institute, Children's Education Resources, Public-Private-Partnerships, Mass Communication and Evaluation, etc.—within the Nutrition Education and Training and Technical Assistance components of this initiative. Please provide a comparison of the funding made available for each of these specific activities in each of fiscal years 1995–1997.

Answer. That information is provided for the record. The fiscal year 1997 allocations represent the current budget plan and the fiscal year 1998 allocations will be estimates.

[The information follows:]

SCHOOL MEALS INITIATIVE: SPENDING BY CATEGORY AND APPROPRIATION

	Fiscal year—			
	1995	1996	1997 (estimate)	1998 (estimate)
I. Food Service Training and Technical Assistance:				
Technical Assistance Materials	\$3,904,105	\$1,910,734	\$1,050,000	\$1,000,000
Print and Electronic Food Service Resource Systems ...	1,097,720	97,755	400,000	400,000
NFSMI Cooperative Agreement for Food Service	424,659	250,000	800,000	500,000
II. Children's Education Resources: In-school Education Materials and Community Education Materials	7,884,363	4,821,785	3,200,000

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SCHOOL MEALS INITIATIVE: SPENDING BY CATEGORY AND APPROPRIATION—Continued

	Fiscal year—			
	1995	1996	1997 (estimate)	1998 (estimate)
III. Food Service Training Grants to States	¹ 4,042,391	1,920,665	4,000,000 ³ 3,750,000	4,000,000
IV. USDA/FCS Direct Training and Education	744,652	400,000	.....	.....
V. Children's Communications and Technology	328,130	75,000	.....	200,000
VI. Team Nutrition Partnership Support: Resources for Team Nutrition Schools and Partnership Network Support	106,717	247,061	.....	200,000
VII. Evaluation	1,702,736	² 777,000	.....	500,000
Total	20,235,473	10,500,000	10,000,000	10,000,000

¹ Includes 1995 Team Nutrition Grants plus partial funding for 1996 Team Nutrition Grants.

² Includes \$140,000 for evaluation and \$637,000 for Administrative expenses.

³ \$3,750,000 was reprogrammed to Section 6(a)(3) of the National School Lunch Act to provide grants to States to fund activities that would have otherwise been supported by the NET Program.

⁴ Includes administrative expenses and evaluations.

Question. Management Institute, Children's Education Resources, Public-Private-Partnerships, Mass Communication and Evaluation, etc.—within the Nutrition Education and Training and Technical Assistance components of this initiative. Please provide a comparison of the funding made available for each of these specific activities in each of fiscal years 1995–1997.

Please provide detail on the food service training grants awarded to states in each of fiscal years 1995–1997, identifying the state, the amount of the grant, and a brief description of the project for which the award was made. For each fiscal year, please provide this same information for grant requests received by states for which no award was made.

Answer. The information is provided for the record.

[The information follows:]

1995 TEAM NUTRITION TRAINING GRANTS

Arkansas Department of Education—\$185,875

The Arkansas Team Nutrition Training Project was designed to build teams of effective leaders who could maximize the use of available resources to provide healthful school meals that an increasing number of Arkansas students would enjoy. There were three objectives: increase the number of managers, assistants, directors, and State agency staff who are prepared to accept this leadership role; expand the number of school-wide teams of leaders prepared to share this role; and build a technology support system to help sustain leadership learning. The State held training workshops for managers, established technology support demo sites at schools and education cooperatives, and added Health Action Teams to the existing State network.

Georgia State Board of Education—\$199,000

This project involved developing a curriculum for use by a cadre of trainers who conducted customized training based on the manager's choice of meal planning options. The project objectives were: to provide managers with customized training that incorporates the meal planning option they will utilize to implement the Dietary Guidelines in school meals by September 1996; to provide managers implementing the food-based meal planning option with an easy-to-use training tool, the interactive compact disc, to teach consistent, reliable information on meal planning; and to compile up-to-date training materials that can be integrated into the required Training-in-Depth curriculum and other training.

Idaho State Department of Education—\$399,930

Consortium—Alaska, Idaho, and Nevada

This project developed a training infrastructure for four States, one of which used its own funding for the implementation of the School Meals Initiative for Healthy Children. The consortium of States hired a coordinator to develop a three-tiered training program for food service authorities. The first tier dealt with menu standardization, modification, and substitutions; the second tier, nutrient standard menu planning or food based menu planning; and the third tier, marketing and merchandising. A cadre of trainers were established and trained in each State to carry

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out the training. The training program will be incorporated into each State's Nutrition Education and Training Program over the next few years.

Illinois State Board of Education—\$199,984

This project focused on the support and marketing of a new training delivery system to be offered through community colleges. The training focused on developing a "train-the-trainer" session for instructors on implementation of the Department's nutrition requirements and the Dietary Guidelines and also on developing and implementing a marketing initiative to inform school administrators and food service professionals of the training delivery system. In addition, the project focused on training peer consultants who provide more advanced individualized training that food service managers need to implement nutrition requirements. Also, a teleconference to assist with menu planning issues was provided in an effort to reach a large number of food service personnel.

Kansas State Board of Education—\$160,307

The Kansas State Board of Education developed a sustainable Statewide infrastructure to support the Kansas Comprehensive Training System (KCTS) for School Nutrition Professional Development. The Team Nutrition Training Grant objectives involved developing key components of KCTS including quality training resources, a computerized training resource catalog, a Statewide training resource center, formal training, in-service training, independent study, leadership development, and nutrition education integrated with elementary education.

Louisiana Department of Education—\$400,000

Consortium—Louisiana, Oklahoma, and Texas

The objectives of the Louisiana, Oklahoma, and Texas Team Nutrition Training Project were to determine through a training needs assessment, the curriculum needs of school food authorities to implement the revised National School Lunch Program and School Breakfast Program meal pattern regulations. Based upon the needs assessment, a common set of curricula for training school food service personnel were developed. The training was delivered using NETPRO style resource sharing, a Louisiana college center, and electronic communications.

Maine Department of Education—\$66,774

The State agency coordinated with the Maine Technical College System to develop a sustainable training program for school nutrition personnel statewide. The program offered three levels of training. The first level included basic nutrition, sanitation, and safety, which provided basic knowledge and skills. These courses offered as interactive computer programs, and classes met three times during a semester. Grant funds were used to computerize the nutrition component. The sanitation and safety components developed at the Department of Agriculture were used. The second level used technical college faculty, school nutrition directors, State agency staff, local chefs, and other appropriate individuals to train school nutrition staff on implementation of the Dietary Guidelines. This training was broadcast over the Interactive Television Network to assure reaching the maximum number of individuals statewide. A Maine School Nutrition Certificate was awarded at completion of this level. Level three will be an update offered annually and will result in certificate renewal every three years. Grants were made to eight schools to become Team Nutrition Schools. Teams from these schools received training and served as models for other schools Statewide.

Minnesota Department of Education—\$199,868

This project provided school food and nutrition programs personnel with the education, training, and resources necessary to provide school meals that are consistent with the Department's nutrition requirements and Dietary Guidelines for Americans. The Team Nutrition Training Grant project included needs assessments, promotional information, resource development, training delivery systems, evaluation, and follow-up training and technical assistance. The project was done in collaboration with an advisory group involving partnerships with the education community, health organizations, local agriculture groups, and school food and nutrition programs personnel.

Mississippi State Department of Education—\$400,000

Consortium—Mississippi, Florida, and Kentucky

The Teaching Nutrition Techniques (TNT) project expanded the current training infrastructure in Florida, Kentucky, and Mississippi by providing an effective "train-the-trainer" network empowered to deliver user friendly training to site-based child nutrition (CN) employees, the personnel responsible for the quality of meals pre-

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pared and served. Through TNT, CN personnel in 5,500 schools in the three States were motivated, empowered, and trained to implement the nutrition principles of the Dietary Guidelines for Americans through use of quality food preparation methods for menu items. The consortium worked with outside sources to develop TNT Train the Trainer and Package modules which were used to train trainers and CN personnel.

Missouri Department of Elementary and Secondary Education—\$107,240

This project provided in-depth training for State staff on school lunch computer software and expanded training programs for school food service personnel to a year-round effort at multiple sites throughout the State, providing more technical and hands-on training in addition to basic training such as Healthy Edge. Teleconferences reached 9,841 food service personnel plus school administrators. Workshops targeting specific issues and skills followed the teleconferences. The training and teleconferences covered computers, healthy food production and introduction to Nutrient Standards, healthy cuisine for kids, and nutrient standard menu planning.

Montana Office of Public Instruction—\$291,916

Consortium—Montana and Wyoming

The main focus of this joint project was maintaining the health of school-aged children in Montana and Wyoming by strengthening the infrastructure of the nutrition education and school food service training efforts for teachers, school food service personnel, and community educators. Interrelated activities of the project encompassed components to enhance the infrastructure for delivering training on the implementation of the Dietary Guidelines in schools, to enhance the infrastructure of teacher training at the pre-service and inservice levels, to establish a "Team Nutrition School" concept in a rural state, to increase interest in shared healthy meals through a child's cooking program, and to integrate healthy school meals and nutrition education into school health programs. The States accomplished this by conducting training sessions on using fresh produce, recipe modification, three new menu planning systems and establishing a child's cooking program and the Team Nutrition School Model.

Nebraska Department of Education—\$57,100

The purpose of this project was to provide food service directors and managers with the knowledge, skills, and encouragement necessary to provide healthy meals that appeal to their students and meet the department's nutrition requirements through 22 Statewide mini-meetings. They started establish an infrastructure of trainers for school programs. Pre/post tests and assessment questionnaires were utilized to determine Dietary Guidelines implementation as a result of the mini-meeting. Registered dietitians interested in becoming State trainers were invited to attend one of the meetings. This project was accomplished by developing instructional material, pre/post tests, and assessment questionnaires; by collecting, testing, and analyzing recipes; and by scheduling and implementing the mini-meetings to disseminate the information.

New Hampshire Department of Education—\$80,000

New Hampshire provided an inexpensive, effective method for planning and providing children's meals that meet the Dietary Guidelines. It also provided the resources and expertise needed to help children gain the nutrition knowledge and skills necessary to make decisions for healthy lifestyles. Additionally, the State trained school food service personnel to provide training beyond the grant year and to set up a network for them to share solutions and solve problems. The State provided demonstrations and training in various approved software packages, established a resource library, trained personnel in various methods of menu planning, conducted needs assessments and workshops, and provided an electronic bulletin board for food service personnel.

New Mexico State Department of Education—\$199,542

New Mexico, faced with such issues as a diverse population, great geographic distance, and cultural and language differences, planned to form partnerships with nonprofit commodity groups, government agencies, and industry to help make its programs better. It has established a Team Nutrition Training New Mexico Ad Hoc Advisory Committee to address these needs. The State developed a culturally-appropriate menu cycle; identified available resources which support the Healthy Meals Initiative; set up a 1-800 help line, a newsletter, a lending library, and a catalog of local resource people and organizations; established five model demonstration school food authorities to pilot New Mexico Menus and the Healthy Meals Initiative;

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conducted workshops for food service personnel; and developed a long range training plan for implementing the Healthy Meals Initiative at the district/school levels.

North Dakota Department of Public Instruction—\$49,378

The training project utilized three approaches to design sustainable infrastructures to support the training of school nutrition personnel. The approaches were: (1) develop and broadcast two satellite training seminars on the implementation of the Dietary Guidelines for Americans in school meals; (2) organize a cadre of training professionals and conduct initial training of cadre members; and (3) enhance efforts to train local personnel on the use of the team approach to implementing the Dietary Guidelines for Americans in school meals, and to encourage participation in the developed training series plan, "Pathways to a Quality Future."

Rhode Island Department of Elementary and Secondary Education—\$66,330

The Team Nutrition Training Grant Project collaboration established a Statewide training system that provided the means to convey information that is relevant to the time, consistent with the goals, and practical to implement. The State of Rhode Island had three goals in this project: to provide school nutrition and food service personnel with the education, motivation, training, and skills necessary to provide healthy meals that appeal to the children served and meet the Department's nutrition requirements; to transform the cafeteria environment to a learning laboratory that encourages healthful eating habits through the marketing of healthful choices; and to establish a collaboration between school food services and Johnson & Wales University to enhance the image of the school food service profession.

Utah State Office of Education—\$156,708

The focus of this project was to create a network of professionals that possess the capability of training school food service staff throughout the State. This network used professional teachers and dietitians to instruct food service employees on how to use the Dietary Guidelines for Americans in making modifications in their menus and food preparation. The network used the same cadre of trainers to train the local school food service employees in the use of the NuMenus planning systems in their districts. The trainers were contracted from various regions throughout the State and were available to address the needs of the local districts. Their close proximity ensured that employees received proper training. The cadre provided training in areas identified by a needs assessment tool developed by the State Office of Education.

Vermont Department of Education—\$61,417

Building its current professional development system, Vermont planned a year's worth of seminars, workshops, and activities designed to (1) prepare schools to consistently offer meals that meet the Dietary Guidelines, (2) increase student participation in school meal programs, and (3) develop a sustainable body of material to use in future training and establish a support network. The State accomplished this through seminars, training sessions, mentor programs, nutrition education for students, and a model-school program.

West Virginia Department of Education—\$94,713

This project provided a comprehensive integrated approach to attaining nutrition integrity in West Virginia schools. Training and nutrition education opportunities addressed planning, preparing, and promoting healthy meals, and creating a school environment that enhances nutrition learning. Food service personnel, educators, students, and parents were provided team building opportunities. This was accomplished by strengthening the infrastructure (through collaboration, staff development, policy, and training network); providing district food service workshops; providing college courses for school managers; adapting point-of-choice training models; training and supporting school teams; and developing/distributing materials.

STATES NOT FUNDED

Below are the 12 Team Nutrition Training Grant applications that were not funded in 1995.

*New Jersey—*A collaboration between Pennsylvania Department of Education, New Jersey Department of Education and Penn State University would have been established to create a Statewide campaign to provided the immediate training needed for compliance with the new Federal regulations as well as establish a system for continuing education opportunities. This campaign was to include four components: 1) central to the educational campaign was to be a two day, Statewide, interactive satellite conference for all school food service directors—The Team Nutrition Training (TNT) Satellite Conference; 2) leading up to the conference—a pre-con-

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ference education and promotional component; 3) the establishment of an infrastructure within the State for electronic communication network; and 4) a sustainable infrastructure for continuing education. \$73,307

Ohio—This training program for local district staff would have included two levels of training. The first level focused on the understanding of the Dietary Guidelines for Americans and the integration of those principles into menu planning, recipe modification, and food preparation skills. The second level training focused on the skills necessary to accomplish nutrient analysis of menus and nutrient standard and food based menu planning. \$200,000

Oregon—The training project would have utilized an existing statewide training structure (NETPRO Oregon) to deliver Nutrient Standard Menu Planning training for healthy school meals to schools throughout Oregon. A comprehensive training program would be developed using multimedia equipment to effectively deliver training to schools on site and at state-wide workshops. Additionally, funds would be used to study the nutrient content of meals as selected and consumed by students in a choice-based meal service system. \$145,000

Pennsylvania—A collaboration between Pennsylvania Department of Education and Penn State University would have been established to create a statewide campaign to provide the immediate training needed for compliance with the new Federal regulations as well as establish a system for continuing education opportunities. This campaign consisted of four components: 1) central to the educational campaign—a two day, statewide, interactive satellite conference for all school food service directors—The Team Nutrition Training (TNT) Satellite Conference; 2) leading up to the conference a pre-conference education and promotional component; 3) to establish an infrastructure within the state for electronic communication network; and 4) a sustainable infrastructure for continuing education would be established. \$200,000

Puerto Rico—Train school food service personnel using the 10 hour course “Healthy E.D.G.E. curriculum, in order to incorporate the Dietary Guidelines for Americans in the preparation and service of appealing school meals for Puerto Rico’s younger population. \$200,000

Colorado—Target 35 rural school districts to provide training, assistance and resources to incorporate the Dietary Guidelines in school menus. Objectives were to: survey students to establish food preferences; standardize, modify and do a nutrient analysis of selected revised recipes; establish menus based on the Department’s nutrition standards; and provide nutrition information resources for use in cafeterias and classrooms which would render nutrition information about the school meals. \$98,943

New York—Subcontract with Madison-Oneida Board of Cooperative Education Services (BOCES), for continuation of a contract providing for the development and delivery of a training program in the following areas: dietary guidelines; planning menus to meet the dietary guidelines; use of technology to support nutrient and food based menu planning; and using standardized recipes and food production records. BOCES would also conduct an introductory training session on the Dietary Guidelines in a computer lab for Master Instructors of the Statewide Training Network. \$200,000

Connecticut—Build and expand a sustainable infrastructure for statewide delivery of training. Through a combination of courses, workshops and support resources, the grant would provide the necessary training, skills and motivation for school food service personnel to implement the Dietary Guidelines in school meals. \$199,997

Delaware—A collaboration between Delaware Department of Public Instruction and Penn State University would be established to create a statewide campaign to provide the immediate training needed for compliance with the new Federal regulations as well as establish a system for continuing education opportunities. This campaign would have four components: 1) central to the educational campaign—a two day, Statewide, interactive satellite conference for all school food service directors—The Team Nutrition Training (TNT) Satellite Conference; 2) leading up to the conference a pre-conference education and promotional component; 3) to establish an infrastructure within the State for electronic communication network; and 4) a sustainable infrastructure for continuing education would be established. \$62,527

Michigan—Develop and implement a train the trainer program for child nutrition and comprehensive school health educators, develop training modules on implementation of the Dietary Guidelines, and create an instructional video to be used with the modules. \$200,000

Maryland—Provide a train the trainer model course for the piloted C.H.E.F.S. program (Culinary and Healthful Enhancement of Food in Schools) in Maryland. Each school system would form a training team to train their employees in local settings and to engender the support of the professional chefs in their area to work

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with school nutrition personnel and instruction personnel to teach the course. \$98,057

Massachusetts—Develop a school nutrition training program based on a yearly plan with integral and comprehensive goals and objectives. The goal of the project was to entwine the Dietary Guidelines in areas related to and overlapping school food service programs. The training would target school food service directors, managers, workers, school teachers, health educators, parents, students and the community. \$194,664

1996 TEAM NUTRITION TRAINING GRANTS

Illinois State Board of Education—\$160,275

The Illinois State Board of Education plans to provide three major activities to assist school food service professionals in preparing healthy school meals. The first activity includes a director's and manager's conference held in two locations, providing participants with the chance to develop advanced skills in food service management. Training will include information on Federal program regulations, food purchasing, sanitation practices, and use of the Internet. The second activity planned is a teleconference targeted toward school food service production staff. The teleconference will provide information on the importance of standardized recipes, recipe components, recipe modification, and measuring student acceptance of menu items. Videotapes of the teleconference will be mailed to each school district to be used as a training tool for future staff development. The activity will culminate in a "cook-off," where school food service professionals will be given an opportunity to enter their recipes and menus. Twelve finalists will be selected and videotaped, showcasing the learned skills while promoting the National School Lunch Program. A winner will be selected by a panel of judges consisting of school food service personnel, students, media representatives, and parents. A CD-ROM will be developed showcasing the professionals demonstrating food preparation techniques. The third activity planned is the formation of an ad hoc advisory committee consisting of representatives from various National, State, and local agencies already involved in training. Their discussions on strategies and available resources will result in the goal of providing quality staff development for school food service personnel.

Massachusetts Department of Education—\$144,116

The Massachusetts State Department of Education will provide training and technical assistance for their school food service professionals. One project will be teaching nutrition requirements and the Dietary Guidelines for Americans through a traveling interactive workshop called *Dietary Guidelines on the Move*. Free Internet access will be offered to all public schools in the State, and a nutrition web page will be established on the State DOE Web Site as a sustainable way to communicate and transfer information. The State agency plans to offer food service directors of Team Nutrition Schools the opportunity to become members of a peer resource group. This group will submit newsletter articles on their efforts, develop school nutrition goals for schools, and act as a telephone resource for new approaches to introduce the Dietary Guidelines into school meals and the nutrition/health curriculum. Massachusetts also plans to complete a *Cafeteria to Classroom Nutrition* package using materials, curriculum, and cycle menus from the State Heart Association and from the Stalker Institute. Additionally, the State agency plans to provide training for Nutrition Education Health Teams, consisting of school food service directors, health teachers, nurses, guidance counselors, and home economics teachers.

Wyoming Department of Education—\$129,607

The Wyoming State Department of Education proposes a two-phase project. The first phase involves plans to develop five model schools in the State to implement Healthy School Meals. These schools will be the center of a post-project, self-guided, area-support network. On-site training will be provided by project leaders, consultants, and extension educators to school food service personnel, administrators, teachers, and other school or community representatives on successful implementation of the TN plan. A video will be produced on training issues, strategies, and results from the model schools, and will be used to help build partnerships with other organizations around the State. Training workshops on National Food Service Management Institute's *Healthy Cuisine for Kids* will be presented in five locations throughout the State for interested schools.

Michigan Department of Education—\$196,710

The Michigan Department of Education intends to target their high-need, larger school districts that serve about 70 percent of the students in the State. They plan to provide training and technical assistance for school food service personnel in two

components. The first component will involve training 420 two-person teams (the director/supervisor and the head cook/manager) of school food service personnel to prepare and serve healthy meals meeting the Dietary Guidelines, using hands-on *Healthy Cuisine for Kids* curriculum developed by the National Food Service Management Institute. Once trained these teams will train their employees at the local level, resulting in 4,200 additional trained school food service personnel. The second component is designed to build partnerships at the local level to support and enhance TN Schools. They plan to develop and distribute video packets as a technical assistance piece designed to help food service personnel networking with county extension personnel, build community partnerships to support and foster implementation and expansion of TN School activities.

Colorado Department of Education—\$82,225

The Colorado Department of Education plans to target all Colorado school districts to provide training, assistance, and resources to implement the Department's Healthy School Meals Initiative (HSMI). Their efforts will begin with a student survey to determine their food preferences. The information will be used as a basis for creating menus which meet the HSMI using USDA standardized recipes, *Tool Kit* recipes, and local district standardized recipes. They also plan to provide training, technical assistance, and resources to school food authorities to help them incorporate USDA recipes with quality food preparation techniques. The training will include *Culinary Techniques for Healthy School Meals*, *Trimming the Fat*, and nutrient analysis software. They will also provide assistance and technical training to school district personnel that will help school food service personnel and educators provide information to students, parents, and the community about nutrition and the HSMI guidelines. TN curricula, menu templates, and other resources will be distributed, and presentations by the Junior Chefs will also be given to students in classrooms.

Idaho State Department of Education—\$399,588

Consortium—Alaska, Idaho, and Nevada

The consortium of Alaska, Idaho, and Nevada will expand the training infrastructure for their States and the State of Washington using their own funds for the implementation of the Healthy School Meals Initiative (HSMI). They will compile available resources and develop supplemental materials for the train-the-trainer workshops. Training will take place in each State. The consortium will also develop training materials for residential child care institutions (RCCI's), to include an analyzed and tested cycle menu which will include smaller sized recipes and food items commonly served in their programs. They also plan to develop a training tool for school food service personnel (servers, cashiers, part-time employees and substitutes) to provide education, motivation, training, and other skills necessary to provide healthy meals. Additional HSMI materials will be used, and offer versus serve materials expanded especially for cashiers. They want to promote HSMI through nutrition education in the classroom, community, and cafeteria by providing five Regional presentations. State and local partnerships will be developed, and training offered to teachers, principals, parents, and students on the importance of healthy school meals. At least five mini-grants will be awarded to schools for development of model programs to support healthy school meals. Food and Nutrition Information Center will deliver training to the trainers on the *Healthy Meals Resource System*, in turn, the trainers will go back to their States to deliver training on meeting the new regulatory requirements and the Dietary Guidelines.

Louisiana Department of Education—\$195,403

The Louisiana Department of Education plans to expand on their previous efforts by strengthening their training infrastructure. The first project they plan to undertake is the review and revision of the State agency's current food service technician and manager training program to reflect the changes in the Federal regulations and the National School Lunch and School Breakfast Programs. They plan to expand their pool of NETPRO trainers from 10 to 20, and work with the State Cooperative Extension Service and Office of Public Health to train State agency officials and key leaders in the State on the revised meal pattern regulations, allowing them the chance to serve as valuable resources to the local school food authorities. Louisiana also plans to expand the use of electronic networking among school food authorities by 50 percent. This will improve communications and support the access to information on nutrition, food preparation, and the changing requirements.

Minnesota Department of Children, Families and Learning—\$188,236

The Minnesota Department of Children, Families, and Learning plans to sustain the created training infrastructure by completing a multitude of projects. They plan

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to combine the activities of their established Team Nutrition (TN) Training network with the initiation of a mentorship program throughout the State. The mentors will be school food service personnel who have met the goals of the Healthy School Meals Initiative and who can provide leadership and support to those school food authorities that are striving to meet the Dietary Guidelines. Specialized TN trainers will be activated to promote and train food service personnel on NuMenus and the revised *Minnesota LunchPower Menus*. Minnesota will design training opportunities based on the learning style and educational needs of their food service personnel. The training opportunities will include mini-promotional workshops and regional carnivals. They also plan to show school food service personnel how to market their programs by using TN materials, a marketing guidebook, and student posters and newsletters. Finally, they plan to collaborate with communities by continuing their TN Partnership Advisory group and foster a collaboration with the Minnesota Extension Service to provide promotional training sessions.

Mississippi Department of Education—\$200,000

The Mississippi State Department of Education, in conjunction with the University of Southern Mississippi, plans to implement a database system called *Mississippi MiniMax Menus (4M)*. Using this database, Child Nutrition Program personnel in over 950 school sites will plan and serve meals that meet the nutrition standards of USDA and appeal to students. Recipes will be modified and standardized, and two sets of menus (for elementary and secondary schools) will be developed. All of the menus in the *4M* database will be analyzed by USDA-approved nutrient analysis software programs. Mississippi will also develop menu modification matrixes (exchanges) and print recipes that school food service personnel can use to create their meals in response to student preferences. Training manuals for *4M* will be developed, and training established on *4M* for the State's school food service administrators and managers, who will, in turn, train their own people.

Montana Office of Public Instruction—\$186,515

The Montana Office of Public Instruction, using the foundation established from the 1995 Team Nutrition Training Grant, will continue to expand statewide training opportunities for school food service personnel and educators in the implementation of the Dietary Guidelines for Americans to shape healthy eating habits in children. Montana plans to distribute their video *What is a Team Nutrition School?* as a marketing tool for promoting Team Nutrition. They will purchase multimedia equipment to be used to train school food service staff throughout the State during Regional training sessions and annual State conferences. Training subjects will include menu planning, procurement, food preparation and services, and nutrient analysis. They will also provide training to teachers on nutrition education during their Regional in-service and summer training sessions. Montana will continue their USDA recipe adaptation project, as well as complete and publish the student acceptance of meals research project findings. Finally, they will initiate a mini-grant program to establish new Team Nutrition Schools.

New Hampshire Department of Education—\$70,554

The New Hampshire Department of Education plans to provide additional training for the school food service professionals in their State with the help of their sister State, Vermont. They plan to provide training for food service directors in both States by pooling resources for high quality training on management issues. New Hampshire will contract with their State School Food Service Association (NHSFSA) to create training focusing on production team skills, teamwork, and the new regulations and will offer training in the *Keys to Excellence*, helping the NHSFSA move toward a peer review program in the State. They will also form a partnership with the State chapter of the American Culinary Federation to connect their members with school food service directors. They will offer NuMenus computer analysis training sessions for 150 school food service professionals and one basic Internet training. In addition, they will obtain assistance with computerized nutrient standard menu analysis for State staff. They will also contract with the National Food Service Management Institute for a Nutrition Education and Training Program needs assessment.

New York State Education Department—\$150,000

The New York State Education Department plans to contract with the Madison-Onieda Board of Cooperative Educational Services (BOCES) to provide training for the State's school food service personnel. BOCES will provide nutrient analysis computer training using a "traveling computer lab", as well as open a resource/informational telephone line for technical assistance once the training is completed. They will deliver the train-the-trainer programs on production records and standardized

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recipes to 30 master instructors. The master instructors will also receive training in the planning and preparation of meals that meet the Dietary Guidelines for Americans (DGA) from the Culinary Institute of America. The instructors will, in turn, go back to their areas and train the local food service directors and staff, teachers, and parents in the preparation of healthful, attractive school meals that will meet the DGA and that are appealing to children.

Rhode Island Department of Elementary and Secondary Education—\$104,168

The Rhode Island Department of Elementary and Secondary Education plans to expand and build upon the core training program established during the 1995 Team Nutrition Training Grant period. They will offer two-day training sessions to multi-level school food service staff, chefs, and other sponsors such as residential child care institutions (RCCIs). Training will cover topics such as low-fat cooking, the use of commodities, food safety, the Dietary Guidelines for Americans, and equipment purchasing. Rhode Island also plans to create a Team Nutrition Training (TNT) Institute at Johnson & Wales University. Upon its inception, chefs and nutritionists will attend one-day annual training sessions at the TNT Institute. They will be given updates on school meal issues and training on how to access resources. A resource center with a lending library is planned, along with an electronic access system, including the Internet. A multi-media TN Resource kit will be assembled using resources already developed. A Team Nutrition core team will plan nutrition activities for schools. Finally, a school food community service component will be added—in-kind service hours will be provided by culinary students at Johnson & Wales University. These students will provide technical assistance to the schools with on-site visits.

Pennsylvania Department of Education—\$192,641

The Pennsylvania Department of Education plans to deliver training in response to needs assessments. The training will be in the form of a series of workshops for school food service personnel. An advisory council and training cadre have been selected, and training has been held on choosing menu planning options and food production. A training workshop on documentation requirements for menu planning options will be offered in three five-hour sessions. Additionally, a *Skills Training* teleconference for school food service directors will be held in July 1997, providing the skills necessary to implement the Healthy School Meals Initiative. They also plan to train the cadre in computerized menu planning and analysis, who will then train directors at the local level.

South Carolina Department of Education—\$167,708

The South Carolina Department of Education plans to set specific standards for entry into the school food service field to ensure the service of quality meals served to students. They plan to establish a food service training resource center with mini-grants to districts or schools to acquire the needed technology to access and use these resources. They will also formulate three guidance books for district supervisors and site managers, giving them information on how to train their personnel on the Dietary Guidelines for Americans and how to implement Healthy School Meals Initiative (HSMI) in their cafeterias. The guidance books will be field tested and revised as necessary. Additionally, they will establish and advertise a training delivery system designed to deliver the majority of small group training in the State. Three training centers in different locations in the State will be used by local school food service personnel to train on HSMI.

Vermont Department of Education—\$83,418

The Vermont Department of Education's project plans to hold a series of training activities addressing how to manage and accomplish changes in food service programs, as well as integrating those programs with nutrition education efforts. The State will expand the nutrition education program by creating a plan for schools and teachers, offering them a day-long conference and mailing on how to implement nutrition education and how to access resources. They plan to increase the skills of food service managers by waging an extensive campaign to address the technological barriers schools face in implementing nutrient standard menu planning. They will contract out training centers at two State technical schools or colleges and offer training in word processing, spreadsheets, nutritional analysis and the Internet. They will also hold a technology fair, advertising it via brochure and by a State school meals web site. The State plans to expand an on-going technical assistance project specifically targeted toward 1/3 of the school food authorities that have 150 or fewer students. The *Small School Survival Strategies* training will cover program management and menu planning. Additionally, other efforts will focus on consolidating the management of as many as 13 separate small School Food Authority's under

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food service managers. They will also offer, in conjunction with the New Hampshire Department of Education, a repeat session of *Planning for Change*. Vermont Interactive TV (VIT) will air a “newsletter” for school food service directors to get updated Healthy School Meals Initiative information and other classes, such as *Prep'niques and Trimming the Fat*.

West Virginia Department of Education—\$59,756

The West Virginia Department of Education plans to build on their efforts toward achieving nutrition integrity in their schools. Under this project, all district menu planners and food service directors will be required to measure and validate the attainment of their nutritional goals for their meals. A six-hour workshop on computer analysis will be developed, along with four regional workshops in school computer labs. All directors and menu planners in the State will be afforded the opportunity to attend one of these trainings. The State will also provide technical assistance to school food authorities who want nutrient standard menu planning or food-based evaluations, and six State agency staff will get a workshop and at least one site visit to test field monitoring procedures, ensuring the transition into the new Healthy School Meals Initiative regulations progress smoothly.

STATES NOT FUNDED

All Team Nutrition Training Grant applications were funded in 1996.

1997 TEAM NUTRITION TRAINING GRANTS

On January 8, 1997, all State agencies that administer the National School Lunch Program and/or Nutrition Education and Training (NET) Program were invited to compete for a Team Nutrition Training Grant. Applications to apply for a grant are due to FCS April 16, 1997 and grant awards will be announced on July 31, 1997.

Question. Last year, Secretary Haas indicated to this Committee that Team Nutrition had entered into agreements with over 200 partners as part of the agency's efforts to leverage public resources.

Would you please provide a list of these agreements and the federal funding, by fiscal year, which has been provided for each.

Answer. Team Nutrition supporters receive no federal funds directly for being a supporter; however, some Team Nutrition funding is used to provide supporters with material designed to keep them up-to-date on Team Nutrition activities and to encourage them to become involved at the local level. A list of current Team Nutrition Supporters is provided for the record. The total exceeds 300 organizations. These Supporters have provided the Agency with a statement indicating their support of Team Nutrition's Mission and Principles. In return they are listed in publications as supporters and are kept informed of Team Nutrition activities and opportunities for their participation in Team Nutrition Schools. Supporters play a key role in the success of Team Nutrition. Their involvement multiplies the resources available to Team Nutrition Schools. They may be volunteers for activities or they may provide food or other supplies in direct support of activities. As a result, for a small federal investment Team Nutrition leverages its limited funds to benefit all participants.

Some organizations included in this listing received Team Nutrition funding through cooperative agreements or contracts for specific product development beyond their role as a supporter. These include the following groups and funds listed by funding year:

	Fiscal year—		
	1994	1995	1996
The Walt Disney Company	\$200,000	\$195,000	.....
Scholastic, Inc	299,538	1,496,814	\$737,313

Many of these Supporters have been involved in Team Nutrition from the beginning through Leadership Forums. Supporters play an important role in mobilizing the community in support of improved child nutrition and these Leadership Forums provide the opportunity for all those interested in children's health to discuss how they can work together. Through Supporter involvement, Team Nutrition has taken hold locally and its principles will be sustained for years to come assuring a healthier future for our children.

[The information follows:]

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These organizations support the Mission and Guiding Principles of Team Nutrition:¹

ADVOCAP, Inc.
Agricultural Women's Leadership Network
Agenda for Children
Albany Park Community Center
Alivio Medical Center
American Academy of Pediatrics
American Alliance for Health, PE. Rec. & Dance
American Association of Family & Consumer Sciences
American Bakers Association
American Cancer Society
American College of Physicians
American College of Preventive Medicine
American Culinary Federation, Inc.
American Dietetic Association
American Farm Bureau Federation
American Federation of School Administrators
American Federation of Teachers
American Fine Foods
American Health Foundation
American Heart Association
American Heart Association, MD Affiliate
American Institute for Cancer Research
American Institute of Wine & Food
American Meat Institute
American Medical Association
American Medical Student Association
American National Cattlewomen, Inc.
American Nurses Association
American Oat Association
American Psychological Association
American Public Health Association
American School Food Service Association
Archer Daniels Midland Company
Archway Cookies
Arkansas Poultry Federation/Egg Council
Association for Child Development
Associated Churches Food Bank System
Association for Children of New Jersey
Association for the Advancement of Health Education
Association of Maternal & Child Health Programs
Association of State & Territorial Public Health Nutrition Directors
Auglaize Mercer CAC
Aurora Project, Inc.
Beef Products
Bennington-Rutland Opportunity Council (BROC)
Better Baked Pizza, Inc.
Big Brothers/Big Sisters of America
Blue Diamond Growers
Boy Scouts of America
Bread for the World
Brooks Foods
Bumble Bee Seafoods, Inc.
California Apricot Advisory Board
California Beef Council
California Department of Education
California Food Policy Advocates
California Fresh Carrot Advisory Board
California Prune Board
California Tomato Growers Association, Inc.
Campaign for Food Literacy, The
Camp Fire, First Texas Council
Cancer Research Foundation of America
Careers Through Culinary Arts Programs
Center for Environmental Education
Center for Science in the Public Interest
Center on Hunger, Poverty & Nutrition Policy/Tufts University School of Nutrition
Cherry Marketing Institute
Children's Action Alliance
Children's Action Network
Children's Defense Fund
Children's Foundation, The
Citizens for Missouri's Children
Citizens for Public Action on Blood Pressure & Cholesterol
City of Columbus, Health Department
City of Rockford (IL) Head Start Program
Colorado PTA
Community & Economic Development Assn. (CEDA) WIC Program
Community Kitchen of Monroe County, Inc.
Community Resource Center (OH)
Comstock Michigan Fruit
ConAgra, Inc.
Congressional Hunger Center, The
Consumer Federation of America
Cooperative State Research, Education & Extension Service, USDA
Corning Consumer Products Company
Council of Agricultural Science & Technology
Council of the Great City Schools, The
Culinary Institute of America
Curtice Burns Foods
Diet Workshop
DINE Systems, Inc.
Dole Food Company, Inc.
Draper-King Cole, Inc.
Eastern Shore Seafoods Products
Finger Lakes Packaging
Florida State Department of Citrus
Focus: Hope
Food Bank of Oakland Country (MI)
Food Chain
Food Marketing Institute
Food Research & Action Center
Food Service System Management Education Council
Food to Grow Coalition, The
Furman Foods, Inc.
Gehl's Guernsey Farms, Inc.
General Mills, Inc.
Georgia Department of Agriculture
Gilroy Canning Company, Inc.

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Girl Scouts of the USA
Girl Scouts—Mile Hi Council
Gleaners Foodbank of Indiana, Inc., The
Green Thumb, Inc.
Health Matters!
H.J. Heinz Company
Hormel Foods Corporation
House of Mercy Daycare
Howard Foods, Inc.
Hudson Specialty Foods
Hunger Action Coalition
Husman Snack Foods
Illinois Community Action Association
Illinois Department of Agriculture
Illinois State Horticultural Society
Indiana Agricultural Leadership
Institute
Indiana State Univ. Department of
Family & Consumer Sciences
International Apple Institute
International Food Information Council
International Food Service Distributors
Association
J.R. Simplot Co.
James Beard Foundation/Dando &
Company
Jewish Healthcare Foundation of
Pittsburgh, The
Johnson and Wales University
Kankakee County WIC Program
Kelly Foods, Inc.
Kent State University, School of Family
and Consumer Studies
KIDSNET
Lakeside Foods, Inc.
Land O'Lakes Custom Products Division
LDS Church-Welfare Services
Life Lab Science Program
MAGNAtracker Company, The
Maudester Farmer
Marriott Management Service
Maternal Child Health Center (IN)
Marvel Entertainment Group
Mello Smello
Memorial Medical Center (IL)
Michigan Apple Committee
Michigan Asparagus Advisory Board
Michigan Plum Advisory Board
Michigan Red Tart Cherry Advisory
Board
Middlesex Co. Vocational Technical High
School
Mid-Ohio Foodbank
Minnesota Cultivated Wild Rice Council
Minnesota Food Education & Resource
Center
Minnesota Food Share
Mothers & Others
Muir Glen Organic Tomato Products
Nalley's Fine Foods
National 4-H Council
National Alliance of Vietnamese
American Service Agencies
National American Wholesale Grocers
Association
National Association for Sport &
Physical Education
National Association of Elementary
School Principals
National Association of Meal Programs
National Association of Psychiatric
Treatment Centers for Children
National Association of School Nurses
National Association of School
Psychologists
National Association of State NET
Coordinators
National Association of WIC Directors
National Black Child Development
Institute
National Black Nurses Association
National Black Women's Health Project
National Broiler Council
National Cattlemen's Beef Association
National Consumers League
National Council of La Raza
National Dairy Council
Dairy Council of Central States
Dairy Council of Mid-East
St. Louis District Dairy Council
Washington State Dairy Council
National Dental Association
National Dry Bean Council
National Education Association
National Extension Association of
Family and Consumer Sciences
National Farmers Organization
National Farmers Union
National Fisheries Institute
National Fitness Leaders Association
National Food Processor's Association
National Food Service Management
Institute
National FFA
National Gardening Association
National Grange
National Heart Savers Association
National Medical Association
National Osteoporosis Foundation
National Pasta Association
National Pork Producers Council
National PTA
National Puerto Rico Coalition, Inc.
National Restaurant Association
National Rural Electric Cooperative
Association
National School Health Education
Coalition
National Turkey Federation
National Urban League
New England Dairy Food Council
New Hampshire Fruit Growers
Association
North Atlantic Sardine Council
North Carolina Sweet Potato
Commission
Northeast McIntosh Growers Association
Northwestern University Settlement
Nutrition Council of Greater Cincinnati
Nutrition Education Learning Lab
Ocean Spray Cranberries, Inc.
Ohio Hunger Task Force
Orange County WIC/Child Health
Project

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Ore-Ida Foods, Inc.
Organization of Chinese Americans
Our Daily Bread
Pennsylvania Coalition on Food & Nutrition
Perdue Farms, Inc.
Physical Rehabilitation & Health Center
Pomptonian School Food Service
Post Bulletin (MN)
Potato Board, The
President's Council on Physical Fitness & Sports
Procter & Gamble Company, USA
Produce for Better Health Foundation (5-A-Day)
Produce Business
Produce Marketing Association
Produce Productions, Inc.
Project NOW Community Action Agency
Public Voice for Food & Health Policy
Pumpkin Circle
Quaker Oats Company, The
Randall Foods Products, Inc.
RC Fine Foods
Sabatasso Foods, Inc.
Scholastic, Inc.
Second Harvest Foodbank Network
 Second Harvest—St. Paul
 Second Harvest—Tri-State Food Bank, Inc.
Seward Dairy, Inc.
Shape Up America
Share Our Strength
Simpson Housing Services
Snyder of Berlin
Society for Nutrition Education
Society of State Directors of Health, Physical Education and Recreation
Soup Kitchen of Minnesota
Southeast Alaska Health Consortium
Southern Frozen Foods
Soy Protein Council
Squab Producers of California
St. Francis Soup Kitchen (OH)
Sugar Association, The
Sunkist Growers, Inc.

Sunshine Biscuits
Sunshine Natural Market
Texas Citrus & Vegetable Association
Texas Produce Association
Tim's Cascade Chips
Tony's Food Service Division
Tone's
Townsend Culinary, Inc.
Tree Top, Inc.
United Soybean Council
United States Department of Education
United States Department of Health & Human Services
United Way of Monroe County (IN)
Urban Coalition, The
University Extension, University of Missouri
University Extension, Schuyler County
University of Cincinnati Nutrition Program & Nutrition Learning Center
University of Hawaii Cooperative Extension Service
Urban Family Institute
Urban Mission Ministries, The
USA Dry Pea & Lentil Council
USA Rice Federation
USA TODAY
Van Camp Seafood Company, Inc.
Vegetarian Resource Group
Virginia Apple Growers Association
Voices for Children in Nebraska
Walnut Hills/Over The Rhine Kitchen
Walt Disney Company, The
Warren County (OH) Head Start
Wawona Frozen Foods
West Virginia Association of Family & Consumer Science
West Virginia WIC Program
Wheat Foods Council
Wisconsin Nutrition Project
Wisconsin Rural Development Center, Inc.
World Hunger Year (Kids Can Make A Difference)
Wyoming Extension
Zartic, Inc.

¹ As of March 17, 1997.

Question. Last year, Secretary Haas indicated to this Committee that the Food and Consumer Service was working with the Economic Research Service to quantify the dollar value of private sector contributions to Team Nutrition; that the analysis was to be completed shortly and would be provided to the Committee. We did not receive a copy of that analysis. Would you please provide a copy for the record.

Answer. A copy of the analysis quantifying dollar value of private sector contributions to Team Nutrition is provided for the record.
[The information follows:]

TEAM NUTRITION LEVERAGING FEDERAL INVESTMENT THROUGH PRIVATE PUBLIC PARTNERSHIPS 7/10/96

Public-private partnerships are critical to the success of Team Nutrition, to ensure that Team Nutrition messages reach children through the media they use, to provide multiple, reinforcing messages, and to leverage scarce Federal resources with private sector support. Team Nutrition has developed an extensive network of partners and supporters, including agreements with two-hundred-forty partners.

USDA has focused on the leveraged value of public resources invested with private partner organizations through cooperative agreements with BVPD, Inc. (Disney) and Scholastic, Inc. Our analysis to date has focused on contributions from Dis-

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ney associated with the production and airing of public service announcements (PSAs) and Team Nutrition materials developed and distributed by Scholastic, Inc.

DISNEY—A WISE INVESTMENT IN CHILDREN'S HEALTH

Disney, in cooperation with Team Nutrition, has developed four PSAs featuring Disney characters from the movie *The Lion King*. Two of the four PSA's have been made available to all broadcast TV stations, networks and cable services for airing at their discretion. The third PSA will be released in June. Disney has also provided USDA with the rights to use Lion King characters on Team Nutrition materials. These images have been used on classroom and cafeteria posters and incorporated into publications to introduce grade school age children to the food guide pyramid concept and to highlight the importance of choosing foods that promote health.

- In the first year alone, for every dollar we invested in Disney, we are leveraging ten dollars of private resources.
- We conservatively estimate that the PSAs will receive at least \$4 million in free air time over the course of just one year.
- USDA did not pay any money to license the Disney characters. Private sector firms would have to pay millions for these rights. Private-public partnerships are critical to leverage scarce Federal resources with private sector support.
- USDA's \$395,000 partnership with Disney is producing nutrition education and promotion materials that teach children to make food choices for a healthy diet.
- The value of the PSAs alone exceed the cost of the investment. The production cost of one 30 second PSA ranges from \$120,000 to as much as \$300,000.

KIDS ARE GETTING THE MESSAGE

USDA's partnership with Disney provides access to children in ways public investment alone could never achieve. One out of every two children in America has seen *The Lion King*. It allows USDA to reach out to children with universally recognized characters. Through Disney's cable network, broadcast television and video rentals we communicate to children through multiple, reinforcing channels, in a language they can understand and in ways they can relate to and accept.

- The PSA's are shown 5 days a week on *Disney Afternoons* which is available in over 90 percent of the country.
- The PSA's are shown every day on the Disney Channel which reaches 15 million subscribers.
- Disney estimates that every day at least 580,000 children between the ages of 2 and 11 are viewing *Disney Afternoons* when PSA's are shown.
- Disney has also included the PSA's in three movie videos for rental throughout the country, each of which is expected to be viewed 27 million times. Disney also included the PSA's on three Lion King cartoon videos.
- USDA tested the PSA's and found that 90 percent of children liked them and most understood the messages to eat more fruits, grains and vegetables, and make healthy food choices.
- The PSA's are reaching children—data from our Team Nutrition pilot communities indicate that nearly two-thirds (63 percent) of the children in four pilot sites had seen the PSA's.

SCHOLASTIC—CRITICAL SCHOOL ACCESS

USDA entered into a cooperative agreement with Scholastic Inc., a leading publisher and distributor of educational materials, to develop Team Nutrition in-school curricula for pre-K to 12th grades. Scholastic estimates the value of services provided to FCS at \$3.0 million. FCS paid \$1.7 million.

- The first 10,000 Team Nutrition Schools are receiving Scholastic Classroom Kits at no charge.
- USDA negotiated a discounted price (\$55) for Scholastic materials that will save schools half the normal cost of the package (\$110). By facilitating the distribution of these kits at one-half their normal retail price, FCS will be leveraging its investment by \$1.7 million over four years.
- In addition to the services it has already provided, as part of its cooperative agreement with FCS, Scholastic has agreed to solicit sponsorship for the distribution of materials from corporations and associations in order to provide kits to low-income schools at no cost. Scholastic has estimated that this will create an additional \$2 million in private sector support. The combination of donated services, discounted material prices, and private donations will provide USDA with a \$3 return for every Federal dollar invested.

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USE, REUSE AND REPACKAGE

USDA is reinforcing Team Nutrition messages and stretching Federal investment by using materials developed by Disney and Scholastic, Inc. in multiple, reinforcing ways.

—Nutrition education activities developed for classrooms have been adapted and repackaged to provide parents and community groups that reach children on a daily basis with active, hands-on learning activities.

—Scholastic *“Take Out,”* a parent newsletter, provides parents with information to reinforce classroom messages.

—*Food, Family & Fun A Seasonal Guide To Healthy Eating*, features activities developed by Scholastic, the Disney characters Pumbaa and Timon, and recipes adapted from school menus. The book provides family learning activities that make nutrition fun.

—Disney PSA’s have been incorporated into classrooms curriculums, reinforcing and expanding the messages that children see on television.

—Scholastic articles in a wide array of publications targeting students, teachers, administrators and coaches feature Team Nutrition messages.

Question. In its fiscal year 1997 report, the Committee encouraged the Department to establish a panel to review and evaluate food service training grant applications submitted by States to ensure the award of funds to the highest quality projects benefiting the maximum number of students and school districts. Have you done this?

Answer. Yes, the FCS did establish a panel of headquarters and Regional office FCS employees to review and evaluate food service training grant applications. This panel followed evaluation criteria designed to ensure high quality projects that would benefit the largest possible number of students and school districts. However, FCS did not establish a panel of outside parties to review and evaluate Team Nutrition (TN) Training Grants for Healthy School Meals because it was determined that this could create a conflict of interest.

Question. Please explain the Department’s procedures for reviewing and evaluating food service training grant applications, including who participates in this process.

Answer. All Team Nutrition (TN) Training Grant Applications that meet the published deadline for submission are screened for completeness and conformity to the requirements stated in the application package. Applications meeting the screening requirements are then reviewed competitively by a panel composed of FCS staff. The panel reviews and ranks each application based on the technical evaluation criteria outlined in the application package and provides explanatory comments based on the criteria. Based on the availability of funds the highest ranking applications are then awarded funding. In 1996, all TN Training Grants were funded.

Question. Please describe the cooperative agreements with the National Food Service Management Institute (NFSMI) funded with the \$800,000 provided for fiscal year 1997. Of the \$10 million requested for the school meals initiative for fiscal year 1998, how much is included for cooperative agreements with the NFSMI? What cooperative agreement work is planned for fiscal year 1998?

Answer. Two Cooperative agreements were funded by the National Food Service Management Institute with the \$800,000 provided in fiscal year 1997. One is a National technical services project that the Institute will manage in cooperation with USDA/Food and Consumer Service and State Agencies. This project will provide one-on-one assistance to nearly 100 local schools on site with menu planning, quality food production, food procurement practices and nutrient analysis of menus. This project will target small to medium school systems across the Nation. Schools will request the service through their State Agencies. The Institute will be responsible for the training and assignments of a cadre of “out-post” nutrition and food service consultants who will respond to these requests. The second project will be the continuation of the Customer Service Help Desk into its third year. This project provides an 800 number phone line as well as an Internet address for the use of local school food service staff. Questions are answered and technical assistance and materials are provided in the areas of menu planning, nutrient analysis, food systems management, recipes, food production, Dietary Guidelines for Americans, marketing of healthy meals and quantity food service equipment, etc. Currently the Institute is receiving an average of 150 questions per month including phone and Internet requests.

In fiscal year 1998, funding for the National Food Service Management Institute is planned at \$500,000. Currently, the Agency is providing a yearly sum of \$250,000 for the ongoing services of the Customer Service Help Desk. Projects other than those discussed above have not yet been identified. The National Food Service Man-

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agement Institute and USDA/FCS work together with the Institute's National Advisory Committee to determine major projects and priority needs. The National Advisory Committee is made up of representatives from State Agencies, Local Programs, professional organizations, universities, food industries and Federal Agencies. The National Advisory Committee met on March 21–23, 1997.

Question. Please explain how the Team Nutrition in-school and other nutrition education materials which you have developed, produced and disseminated are being used by schools, teachers, parents, and communities to educate children to make healthy food choices.

Answer. Scholastic, Inc., in cooperation with USDA, developed an in-school curriculum which is the centerpiece of the elementary school material. This curriculum incorporates nutrition education and information into other curriculum area such as math, science, social studies and health. With this approach, children can be provided with nutrition information throughout the year. The objective is to raise the children's awareness of nutrition to encourage them to make behavior changes. We want them to make food choices that result in a healthy diet. To date, more than 20,000 of these kits have been distributed. The kits cover pre-kindergarten to kindergarten, grades 1–2 and grades 3–5.

Schools across the country have begun to use the Team Nutrition materials to engage children, eager to participate in hands-on activities. They are reinforcing positive nutrition messages through colorful posters displayed around the school—in classrooms and the cafeteria alike. In addition, they are conducting health, food or nutrition fairs which provide children the opportunity to taste test new foods, to learn how to read a nutrition label, plant a Team Nutrition garden, study the foods used in different regions of the Nation, assist food service staff in preparing a meal or any number of other activities which provide children the opportunity to experience and learn about food in fun ways.

Parents are becoming involved by participating in these fairs and through the parent materials provided to them. Materials developed and distributed in cooperation with PTA include parent Tip Sheets and the Team Up At Home activity booklet which is filled with fun educational activities for parents to do with their children. These materials are designed to reinforce the positive nutrition education messages children are receiving at school.

Communities are involved through the Cooperative Extension Service. The Community Nutrition Action Kit has received overwhelming positive response and is being utilized by Extension staff as well as public and private health professionals. All these efforts are directed toward educating children about the importance of the food choices they make. They are responsible for what they choose to eat which determines how healthy they are.

RESEARCH AND EVALUATION

Question. The fiscal year 1998 request proposes \$17 million to partially restore funding for research and evaluation in the food and nutrition assistance programs. As you are aware, funding for research and evaluation was reduced to \$7.5 million for fiscal year 1997 in large part due to constraints on discretionary funding. However, there was also concern over the value and priority of the research work being conducted. What process is used to make sure that only priority work is funded, and to discontinue any ongoing work that may not be of particular value?

Answer. Every year FCS follows a formal process to ensure that research studies are relevant to the concerns of Congress, policy officials, and other stakeholders. In doing so, FCS attempts to respond not only to current policy information needs, but also to anticipate emerging or future needs.

In the planning process, the highest priority goes to the formal and informal mandates received from Congress, these studies are funded before any others are considered. If sufficient funds remain to address additional policy questions, FCS reaches out simultaneously to policy officials and operating managers of food assistance programs; officials in other government agencies including the Congressional Budget Office, Congressional Research Office, other Federal agencies, and associations and public interest groups with a stake in food assistance. FCS seeks not only areas of important policy information needs, but also opportunities to collaborate with others to leverage existing resources as much as possible.

With these views in hand, the FCS prepares a 2-year Research & Evaluation Agenda, balancing the available resources with the most pressing policy information needs. The plan is reviewed by all operating divisions within the Agency, endorsed by the Agency Administrator, and submitted to the Under Secretary for Food, Nutrition, and Consumer Services for review and approval. Each project in the approved plan that requires advisory and assistance services—including virtually all research

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contracts—is individually reviewed and approved again by the Under Secretary before any funds are committed.

The 2-year plan is revisited in mid-stream to ensure that previously identified plans are still policy-relevant and adjusted as needed to reflect current funding levels. The Agency also reviews our ongoing studies continuously to endure their continued relevancy and priority, again making mid-course adjustments if needed.

FCS constantly seeks to improve this process to ensure that our work responds to the needs of all our audiences.

Question. For each of the food assistance programs, please identify the amount of funding spent on research and evaluation in each of fiscal years 1993–97 and proposed for fiscal year 1998, identifying the study funded, its purpose, who is carrying out the study, its cost, whether it is considered a new or ongoing study, and the estimated completion date.

Answer. The requested information for studies receiving funds in each of fiscal years 1993–97 is provided for the record. Because the procurement process for fiscal year 1997 studies is not final, some information on 1997 studies is still unknown.

The fiscal year 1997 appropriation reduced the funds available for research and evaluation from \$18.2 to \$7.5 million. The President's budget request includes \$17 million to partially restore these accounts to their previous levels. At the level requested for fiscal year 1998, FCS would use the funding to:

- Help States identify effective and efficient ways to design and run programs using the new flexibility provided by welfare reform. What works best in moving clients to self sufficiency? Which State work programs are most effective in moving the able-bodied into work? How can States take advantage of new options to increase child support payments, encourage personal responsibility, and reward work?
- Respond to Congress' mandate to study the effects of welfare reform on CACFP. Without these funds, FCS cannot address critical questions posed in the legislation.
- Develop cost-effective ways to improve program integrity and reduce administrative costs, focusing on operational improvements to reduce error and fight trafficking. Additional funds would enable extensions of ongoing food stamp research on recipient and retailer trafficking to better target investigations and focus WIC research on improving program management and efficiency. For example, how can States most efficiently manage food package and administrative costs?
- Respond to recommendations from the scientific community to strengthen the WIC Program, including development of tools to support eligibility determinations.
- Continue development and evaluation of cost-effective EBT systems for WIC.
- Sustain critical updates of the characteristics of food stamp and WIC participants and track compliance with Congressionally-mandated nutrition standards for school meals.

[The information follows:]

[CLERK'S NOTE.—The summaries of obligations for 1993–97 are not printed in the hearing record but are available for review in the subcommittee's files.]

Question. Last year the Economic Research Service indicated to this Committee that it had expanded and given elevated priority to work in the food, nutrition, and consumer service area. What specific work has the ERS carried out in each of fiscal years 1996 and 1997 at the request of or in collaboration with the Food and Consumer Service (FCS)? Is this work funded by the ERS, or by the FCS on a reimbursable basis? What work is planned for fiscal year 1998?

Answer. FCS and the Economic Research Service (ERS) have a mutual interest in research and analysis of the domestic food and nutrition programs. The Agency has worked with ERS in recent years to make the most efficient use of common data and complementary expertise. Our collaboration has taken two forms.

First, staff in FCS often consult with staff in ERS to draw on their professional expertise in particular areas. At the request of FCS in 1996, for example, ERS staff participated in an interagency working group on food security measurement, consulted on the design and analysis of two National surveys of Food Stamp Program participants and authorized retailers, served on an interagency expert panel on the feasibility of a rural food price monitoring system, and analyzed bidding procedures used to obtain WIC infant formula rebates. These consultations were funded by ERS.

Second, on some occasions FCS has found it more cost-effective to reimburse ERS for services that might otherwise be provided by a contract or grant. In 1996, FCS and ERS negotiated a Food Stamp Program Research Agreement in which FCS pro-

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vided ERS \$250,000 in return for four basic research projects of mutual interest, including a comparison of food expenditure measures derived from the Food Security Supplement to the Current Population Survey with measures derived from the Consumer Expenditure Survey, an analysis of the relationship between food sufficiency and nutrient intakes, an analysis of measures of well-being collected as part of the Survey of Income and Program Participation, and a concept paper on issues, problems, data needs, and modeling approaches to develop comprehensive economic models of food assistance and agricultural programs. In addition, FCS provided ERS \$25,000 to support purchase of a commercial data set of prices paid for food in supermarkets.

With the reduction in appropriated funds for research in 1997, FCS was unable to continue the reimbursable agreement with ERS although the Agency continues to consult with them as appropriate. In particular, ERS staff are part of an inter-agency working group assembled to respond to the Congressional mandate for a study of the effects of allowing the purchase of vitamin and mineral supplements with food stamps. With funding at the level requested for 1998, FCS would again look for opportunities to coordinate and support research of mutual interest.

QUESTIONS SUBMITTED BY SENATOR BUMPERS

WIC CASELOAD REDUCTIONS

Question. You indicate that without the supplemental request, WIC caseload would fall from 7.4 million to 7.0 million. What portion of this reduction would include removing current participants from the program and what portion of this reduction would include not replacing participants who are no longer eligible?

Answer. It is not possible to estimate the incidence of one strategy over another for caseload reduction. Depending on their specific circumstances, States utilize a number of strategies to bring their caseloads down when the need arises, depending on their specific situations. FCS does not require reporting of such data, and have no basis for estimating this information.

The expectation is that States will continue to do their best to carefully manage their caseloads and closely scrutinize and monitor their obligations, making adjustments to caseload as necessary, by not certifying persons, or by discontinuing benefits mid-certification. Most State data systems identify the certifications due for the upcoming month, so State agencies are aware of attrition rates for currently enrolled participants. Consequently, caseload reductions can be achieved effectively, and with least disruption to program participants, by either certifying only high priority individuals or by not doing any new certifications. However, if gradual attrition does not successfully achieve needed caseload reduction goals, State agencies may discontinue benefits mid-certification. This latter strategy is encouraged only as a last resort, when quick impact on caseload and expenditure levels is imperative.

WIC IMMUNIZATION

Question. Would you please provide an update on your activities to improve immunization services?

Answer. One of the major public health challenges of this decade is to improve our Nation's capacity to deliver age-appropriate immunizations to infants and young children in need. Failure to vaccinate preschool-aged children resulted in a resurgence of measles cases during 1989–1991 with over 8,000 cases of measles and 29 deaths among children in this age group alone.

The FCS and the Centers for Disease Control and Prevention (CDC), Department of Health and Human Services (DHHS), have an ongoing cooperative effort to increase immunization rates among preschool-aged participants in the WIC Program. Through a strong partnership, FCS and CDC, along with State cooperators, are working to improve the quality of services and the health status of children under 2 years of age who are in need of nutrition assistance and/or immunizations.

As a result of this National initiative, numerous special immunization promotion activities are taking place.

[The information follows:]

—In an effort to deliver needed immunizations to preschool-aged children, FCS and CDC sent a letter to all State Health Officers (January 1995) to encourage State Health Departments to promote a continuing partnership between the WIC and State Immunization Programs.

—FCS and CDC have developed a National Strategic Plan as a general guideline for States to consider using to facilitate an increase in immunization coverage

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rates among WIC participants. Many of the ideas advanced in the plan were adapted from State initiatives that employ creative service delivery and cost sharing approaches.

- CDC, in conjunction with WIC State agencies, conducted demonstration projects in several cities to determine the most effective methods of increasing access to immunization through the WIC Program. Data from these projects show that intensified collaboration and resource sharing between State/local WIC and immunization programs improve the service delivery capacity and quality of both programs.
- CDC and FCS supported the American Academy of Pediatrics and other organizations in producing a video which explains to low-income parents the importance of immunizations.

Current Status

- FCS is an active member of the Interagency Committee on Immunizations which is implementing an action plan to improve immunization services for pre-school-age children and target resources to high-risk and hard-to-reach populations. FCS is also an active participant of the Immunization Education and Action Committee of the Healthy Mothers, Healthy Babies Coalition and the National Vaccine Advisory Committee.
- Through the WIC Program and State and local program administrators, FCS cooperates with CDC and many other national organizations to actively promote the annual National Infant Immunization Week.
- The National Association of WIC Directors (NAWD), the Association of State and Territorial Health Officials (ASTHO), CDC, and FCS co-hosted a WIC immunization promotion conference, entitled “Working Together for Healthier Children,” February 12 and 13, 1997. The conference fostered positive communication at the State level between Immunization Programs and the WIC Program by increasing understanding of each programs’ goals and objectives and highlighting win—win situations in State and local WIC and immunization partnerships. The conference also focused on State WIC Directors’ and Immunization Program Managers’ concerns.
- FCS, CDC, NAWD, and ASTHO have formed the WIC/Immunization Research and Evaluation Subcommittee. The purpose of the this group is to coordinate research and evaluation activities directly related to immunization promotion efforts in WIC. The Subcommittee facilitates and reports on cost-effective strategies that improve vaccination coverage rates among WIC participants.
- The Administration’s Childhood Immunization Initiative provides funds to States to strengthen their immunization infrastructure. These funds make vaccination services more widely available by helping public programs buy more vaccines and improve community service and outreach efforts. Many States use the funds to extend clinic hours, hire more staff, increase education efforts, and help create a national tracking system.

FCS has been active and supportive of strengthening State Immunization Information Systems as a major initiative to improve immunization status assessment and referrals among WIC children. To further promote this linkage, in fiscal year 1996 FCS awarded grants totaling \$946,793 for State *WIC/Immunization System Linkage Grants* to nine WIC State agencies to design, develop, and implement information system linkages between State Immunization Information Systems and WIC data systems at the State and local levels. Made possible through funding from the Centers for Disease Control and Prevention’s National Immunization Program, the purpose of this partnership is to enhance automation capabilities in WIC clinics to facilitate accurate and efficient assessment of the immunization needs of WIC infants and children. Grants were awarded to the following States: Massachusetts, Rhode Island, Florida, Texas, Chickasaw Indian Nation, Virginia, Iowa, Nevada and Alabama.

WIC FARMERS’ MARKETS

Question. In what ways has it supported rural economies?

Answer. Approximately \$9,070,553 (Federal funds plus matching funds from non-Federal sources) in WIC Farmers’ Market Nutrition Program (FMNP) coupons were redeemed last year in 1,231 farmers’ markets, many of which were in rural communities. The FMNP combines incentives for local agricultural producers with incentives for WIC participants to make healthy food choices. Based on the most recent survey data available, compiled from a 1995 survey of farmers participating in the program, 84 percent said that participation in the FMNP increased their sales. In addition, 35 percent increased fruit/vegetable production and 32 percent stated that they plan to grow a wider variety of fruits or vegetables next year because of their

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involvement in the FMNP. The FMNP's emphasis on market development, including its provision of an additional 2 percent in administrative funds for this purpose, has increased the number of farmers' markets in rural areas.

Farmers' markets have proven to be a valuable outlet for family farmers to directly market their produce, often providing the primary source of revenue for these farmers. The Department's 1996 National Farmers' Market Directory reports that significant data document the strategic marketing advantages that local producers gain by selling through these facilities, including improved profit margins. This improved profit margin for farmers translates into improved revenue for rural economies. The Directory goes on to state that this method of direct marketing experienced phenomenal growth nationally in the last 2 years. The Directory documents 2,410 farmers' markets operating in the United States during the 1995 calendar year, an increase of 655 markets over 1994. This growth can be attributed in part to this program and its emphasis on market development.

Question. In what ways has it improved the nutrition in-take of WIC participants?

Answer. The WIC Farmers' Market Nutrition Program (FMNP) promotes the consumption of more vitamin and fiber-rich fresh fruits and vegetables. The FMNP's direct linkage of farmers and WIC participants has enabled low income people to become acquainted with where their food comes from, to meet the people that grow it, and to learn preparation tips from the growers. This is a valuable educational lesson for many of our FMNP participants who had never shopped at a farmers' market prior to their participation in the program. Based on 1995 survey data provided by FMNP State agencies, 71 percent of recipients who responded to the survey said they ate more fresh fruits and vegetables during the FMNP season. In addition, 77 percent said they planned to eat more fresh fruits and vegetables all year round.

Question. To what extent is the cost of this program, item for item, higher than expenditures for the regular WIC program?

Answer. FCS can not provide an item for item cost comparison of WIC Farmers' Market Nutrition Program (FMNP) expenditures to WIC expenditures, either for the foods in the program or the administrative and services costs of the programs. Comparative data is not reported to the Department, and the Program requirements, in terms of foods provided, services offered and administrative responsibilities required are vastly different.

With regard to foods provided, for example, the FMNP permits participants to select fresh fruits and vegetables up to a set dollar value on coupons used much like store coupons. The State defines which locally grown fruits and vegetables may be eligible for purchase. The FMNP foods are designed to complement WIC foods, which include an assortment of staple, versatile, readily available, and economical nutritious foods such as eggs, juice, cereal, and dry beans, peas or peanut butter. Using the most recent data, the Agency estimates that in fiscal year 1995, the WIC food package cost approximately \$33 every month for a woman participant. The FMNP benefit, which includes both Federal and non-Federal share, averaged annually about \$14 for fiscal year 1995, and may be provided on a participant basis or for an entire household, depending on State design of the FMNP.

With regard to non-food expenditures, the FMNP and WIC are very different. For example, FMNP has a market development component which is unique to this program, while WIC has other unique and costly administrative responsibilities such as nutrition risk assessment, including tests for anemia; certification of eligibility; referrals; immunization assessment; drug, alcohol and tobacco use counseling; voter registration; and others. Total administrative costs for the FMNP cannot exceed 17 percent of the funds allocated for the program. WIC Program nutrition services and administration expenditures represent about 27 percent for fiscal year 1996 of total program expenditures, however, of course, WIC's programmatic requirements are different from those of the FMNP, as noted above.

COMMODITY ASSISTANCE PROGRAM

Program duplication

Question. The request for the Commodity Supplemental Food Program includes \$86 million in support of 123,900 women, infants, and children.

Is this duplicative of the WIC program?

Answer. The budget request for the Commodity Supplemental Food Program (CSFP) is not duplicative of funding for the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). Section 17(c)(3) of the Child Nutrition Act of 1966 prohibits recipients from participating simultaneously in the CSFP and WIC.

In addition, the formula used to determine the amount of funds needed to support the WIC-eligible population excludes women, infants, and children participating in

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the CSFP. Therefore, the budget request for the CSFP in no way duplicated the amount requested for WIC. Also, over 60 percent of CSFP participants are elderly persons, and the elderly are categorically ineligible for WIC. While pregnant, breastfeeding, and postpartum women, infants and children participate in both programs, nonbreastfeeding women between 6 and 12 months postpartum and children between 5 and 6 years of age are categorically eligible for the CSFP, but not for WIC. Furthermore, CSFP sites serve some areas where WIC is not readily accessible.

Question. In addition to the similarities of CSFP and WIC, in terms of beneficiaries, there appear to be other programs administered by the Food and Consumer Service that serve the same or similar populations.

Can you provide information regarding duplication within various nutrition programs that could, at least potentially, serve the same clientele?

Answer. The Food Stamp Program (FSP) and the Food Distribution Program on Indian Reservations (FDPIR) are designed to help a broad array of low-income households obtain nutritionally adequate diets. Most other FCS nutrition programs are targeted to meet the nutritional needs of specific population groups. The targeted programs include the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), the Commodity Supplemental Food Program (CSFP), the Nutrition Program for the Elderly (NPE), and the Child Nutrition Programs. The Child Nutrition Programs are the National School Lunch Program (NSLP), the School Breakfast Program (SBP), the Special Milk Program (SMP), the Child and Adult Care Food Program (CACFP), the Summer Food Service Program (SFSP), and the Homeless Children Nutrition Program. Targeted programs provide prepared meals or supplemental food packages and other nutrition services to specific population groups. Finally, The Emergency Food Assistance Program (TEFAP) is designed to supplement the diets of low income households with food items.

It is possible in a limited number of cases that an individual may participate in food stamps as well as more than one targeted benefit program (i.e., WIC and CACFP). However, as these programs are designed to meet needs which are sufficiently different (i.e., nutritious supplemental foods for individual consumption and nutrition education in WIC versus nutritious CACFP meals in a child care setting), this should not be considered duplication.

It is also possible that an individual who participates in a targeted program may also reside in a household participating in the FSP or FDPIR, e.g., a child living in a FSP household who also participates in the NSLP. However, these and other arrangements where individuals participate in both the FSP or FDPIR and a targeted program do not constitute duplication of benefits, as the programs are designed to meet different needs.

Data from the 1977-78 National Food Consumption Survey (NFCS), the most reliable data available for this purpose, indicate that significant nutritional improvements can be made by supplementing the FSP with targeted programs. The NFCS found that only one in ten households with food expenditures comparable to the maximum FSP allotment consumed 100 percent of the Recommended Daily Allowance (RDA) of 11 key nutrients. NFCS also found that the proportion of households attaining this nutritional level increased rapidly with increased food expenditures: 1 in 3 households with expenditures one and one-half times the maximum FSP allotment and 2 in 3 households with expenditures two times the maximum FSP allotment attained this nutritional level. The NFCS data suggests that FCS's targeted programs complement the FSP and FDPIR and play an important role in helping individuals with special nutritional needs (such as children and the elderly) who reside in low-income households realize nutritionally sound diets.

Question. Are there opportunities to consolidate any of these programs?

Answer. A consolidation opportunity that FCS is currently pursuing within the Child Nutrition (CN) programs is combining the National School Lunch Program (NSLP) and the School Breakfast Program (SBP) into a unified School Nutrition Program. FCS is currently developing regulations to implement this consolidation. In addition, the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (Public Law 104-193), required that FCS develop a proposal to consolidate the NSLP, SBP and the Summer Food Service Program (SFSP). The Agency will be developing a proposal in accordance with the requirements of the law to integrate the portion of the SFSP which operates in schools into the consolidated School Nutrition Program.

Although the CN programs serve similar constituencies and provide similar benefits, the opportunities for increased efficiencies through consolidations, other than those noted above, are minimal. A table which displays all the CN programs and their key characteristics is submitted for the record. It shows that the main difference between the various CN programs is the location where benefits are pro-

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vided. The administrative network which schools belong to is very different than the administrative networks for day care centers and homes. The same is true of the networks for summer camps and homeless shelters. Other differences associated with location are the number of children being served, the amount of time the children are at the serving site each day, the cost associated with providing a meal, and the expertise that FCS can reasonably expect of the food service operators. These differences necessitate different regulations for reporting requirements, oversight and review requirements, nutrition requirements, site approval standards, accounting, etc. While Special Milk Program (SMP) benefits are provided in schools, as are NSLP and SBP benefits, the SMP operates only in schools without NSLP or SBP operations and provides students only with milk. In the case of the Summer Food Service Program (SFSP), the non-school SFSP sites, unlike NSLP/SBP schools, typically operate only a few months during the year, do not experience stable attendance, do not all have well developed administrative support structures, and do not have comparable food preparation expenses.

[The information follows:]

Program	Benefit recipients	Benefits provided to recipients	Location(s) benefits provided
National School Lunch Program (NSLP)	Elementary & secondary school students.	Prepared lunches	School.
School Breakfast Program (SBP)	Elementary & secondary school students.	Prepared breakfasts	School.
Special Milk Program (SMP)	Elementary & secondary school students in schools without the NSLP or SBP.	½ pints of milk	School.
Summer Food Service Program (SFSP)	Low-income children, below age 18, living in low-income areas.	Prepared meals	Summer camps, schools, etc.
Child and Adult Care Food Program (CACFP).	Children, below age 12, and disabled adults in day care.	Prepared meals	Day care homes & day care centers.
Homeless Children Nutrition Program	Homeless children in shelters	Prepared meals	Homeless shelters.

The other nutrition programs administered by FCS, in addition to the Commodity Supplemental Food Program (CSFP) and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), are the Food Stamp Program (FSP), the Food Distribution Program on Indian Reservations (FDPIR), The Emergency Food Assistance Program (TEFAP), and the Nutrition Program for the Elderly (NPE). The FSP and FDPIR help a broad array of low-income families purchase nutritionally adequate diets, while TEFAP, NPE, and the CN programs provide targeted nutritional assistance to specific population sub-groups. The targeted programs complement, but do not duplicate, the nutritional support provided through the FSP and FDPIR.

A table which displays the FCS programs, except WIC and CSFP, and their key characteristics is submitted for the record. Unlike the CN programs, in which the location where benefits are provided is key, this table shows there is no summary differentiating characteristic for these FCS programs. Rather, what distinguishes them is the benefit delivery system each program needs to meet its goal of providing specific nutritional assistance to its target population.

For FDPIR the target population is low-income households on Indian reservations who do not have access to retailers accepting food stamps. Providing benefits to this population can require a distribution system capable of delivering food to places on Indian reservations far away from retail outlets. No other program in the table can provide benefits comparable to FDPIR for households on reservations.

In the NPE the targeted population is the elderly who participate in Department of Health and Human Services programs. Many NPE recipients cannot prepare their own meals, and the NPE is the only program in the table designed to provide prepared meals to immobile elderly recipients. As you know, FCS has proposed in the past, and still support the consolidation of NPE with its much larger sister feeding program run by HHS. We recommend that these programs be consolidated.

TEFAP a significant part of the targeted population is emergency feeding centers (e.g. soup kitchens). TEFAP is the only FCS program designed to provide bulk commodity shipments in support of emergency feeding centers. The focus of the FSP, FDPIR, CN programs, TEFAP, and the NPE are all different enough so as to require different benefit delivery systems. This diversity causes FCS to believe that

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further consolidation would not, at this time, produce noticeable savings or efficiencies.

[The information follows:]

Program	Benefit recipients	Benefits provided to recipients	Location(s) benefits provided
The Emergency Food Assistance Program (TEFAP).	Emergency feeding centers & needy individuals.	Commodities	Emergency feeding centers & households.
Nutrition Program for the Elderly (NPE)	Elderly participating in Department of Health and Human Services programs.	Prepared meals	Group settings, households.
The Food Stamp Program (FSP)	Low-income households	Food coupons	Retail grocery outlets.
Food Distribution Program on Indian Reservations (FDPIR).	Low-income households on Indian reservations.	Food packages	Indian reservations.
Child Nutrition Programs (CN)	Children	Prepared meals	Various away-from-home locations.

Question. Would such consolidation result in savings?

Answer. The consolidation of the National School Lunch Program (NSLP) and the School Breakfast Program (SBP) into the unified School Nutrition Program is unlikely to result in more than minor savings for State and local program administrators. The consolidation rule will provide for some administrative efficiencies, but will not reduce nutrition benefits to children. The FCS is currently working on a proposed rule to consolidate the NSLP and SBP and has not yet completed its formal assessment of the savings, if any, that will result from this consolidation.

Consolidation of the USDA and HSS components of NPE would not likely yield savings at the Federal level either. State and local agencies administering these important food programs for the elderly, including the unique meals-on-wheels program, would likely experience significant efficiencies although cost savings potential appears slim there too.

FCS believes that opportunities for significant further consolidation do not exist at this time, and that such consolidation would not produce further savings.

QUESTIONS SUBMITTED BY SENATOR KOHL

WIC SUGAR CAP

Question. USDA is proposing to reopen the issue of the sugar cap for cereal eligible for the WIC program. For people who are nutritionally at risk, as WIC recipients often are, it is critical that opportunities are provided to maximize the nutritional value of all food consumed, in order to achieve a close to a balanced diet as possible.

Given that goal, I am concerned that any increase of the sugar cap for WIC cereals above the current level will only increase intake of empty calories by WIC recipients, at the expense of the more nutritious foods that these WIC recipients so badly need.

It is my understanding that the sugar cap has been reviewed numerous times in recent years, without significant change. Why is USDA reopening this debate?

Answer. The Department is committed to ensuring that the Federal requirements and other guidelines for the WIC Program are based upon sound scientific evidence. The majority of contemporary studies fail to document an association between sugar consumption and an increased risk of developing the chronic diseases of coronary heart disease, diabetes mellitus, obesity and hyperactivity. Therefore, the Department sought public comment through a Federal Register Notice, published on March 18, 1996, on whether a change in the current 6-gram sugar limit for WIC-eligible cereals was still warranted. FCS does not plan to change the limit, but the Secretary has called for a review of permissible WIC foods in total. So the sugar limits will be looked at again in concert with all permissible foods.

Question. In December of 1996, in an effort to help bolster rapidly falling dairy prices, Secretary Glickman announced his intentions to increase the purchases of dairy products for the school lunch program and other USDA nutrition programs.

Could you provide me with data to demonstrate how USDA increased use of dairy products for nutrition programs since December, by volume and value of product, relative to previous years?

Answer. The accelerated purchases of cheese for National School Lunch Program (NSLP), for the period July 1996 through February 1997 shows a total of 58.3 mil-

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lion pounds valued at \$90.6 million. For the same period last year, July 1995 through February 1996, the total cheese purchases were 55.5 million pounds valued at \$77.7 million. It cost FCS \$8.6 million extra for current year purchases because of the price increases for cheese. In addition, an accelerated purchase of 2.8 million pounds of cheese valued at \$4.3 million was made, to support the dairy industry.

In addition to the accelerated purchases of cheese for the NSLP, the Department purchased for the Commodity Supplemental Food Program (CSFP) \$5 million in processed cheese for distribution in CSFP. The Department also plans to purchase 2.5 million pounds of cheese valued at \$4.0 million to supply CSFP with sufficient product for the remainder of fiscal year 1997.

The purchase and distribution of other dairy products is comparable to prior fiscal years.

FARMERS' MARKET NUTRITION PROGRAM

Question. I have long been a supporter of Farmers' Market Nutrition Program (FMNP) and was pleased to see the Administration's request for an increase in that program in fiscal year 1998, to the \$12 million level. The FMNP program has been very successful in the three Wisconsin sites where it has been implemented. However, it is my hope that more Wisconsin sites could be started in the near future. In that context, I have the following questions:

If the Subcommittee is able to fund the FMNP at the increased levels proposed in the budget, how does USDA propose to distribute those increased funds?

Answer. By law, the first priority for these funds is to restore State agencies to their previous year's funding level. Of the remaining funds, 75 percent would be allocated to currently participating State agencies that request expansion funding. A funding formula, designed by the Department in consultation with State agencies, is used to distribute expansion. Basically, this formula ranks State agencies according to their previous year's average FMNP grant per WIC participant. Expansion requests are funded in rank order, beginning with the State agency with the lowest FMNP grant per participant. The remaining 25 percent would be allocated to new State agencies that are seeking to initiate a WIC Farmers' Market Nutrition Program (FMNP). A ranking process, based on factors specified in the law, is used to allocate funds to new State agencies. The law requires allocation on the basis of factors such as prior experience with a similar program, State plans that have the greatest access to farmers' markets, the highest concentration of eligible persons and such other factors as determined appropriate by the Department.

Question. There has been some concern about the practice of funding the FMNP as part of the WIC program. Given that concern, would USDA support funding for the FMNP through AMS, or another agency other than the FCS? Are there any reasons why such a transfer would be ill-advised?

Answer. Because WIC participants or persons on a waiting list for WIC services are the only persons eligible to receive Federal benefits under the WIC Farmers' Market Nutrition Program (FMNP), it seems only natural that the funding for the two programs should be administered by the same Federal agency. FCS has worked closely with the FMNP State agencies to establish an infrastructure for the operation of the program, and is the only USDA agency with experience in the administration of both grant and entitlement Food Assistance Programs. AMS' strength is in administering direct marketing programs. As long as the FMNP and WIC continue to be linked legislatively to a shared population of recipients, FCS believes it is the best interests of both Programs to be administered and funded through FCS.

The WIC Farmers Market Nutrition Program Association at one point thought such a transfer of program administration might overcome problems under current appropriations law regarding WIC and FMNP. Under this legislation, annual funding for FMNP has for the last two years been contingent upon the ability of WIC to sustain its current participation with funding provided. Under this construct, FMNP can only receive continued funding if not needed by WIC to sustain its participation levels. This problem cannot be solved with such a transfer of administrative responsibility to another USDA agency.

SCHOOL MEAL DIETARY GUIDELINES

Question. The Healthy Meals for Children Act was passed last Congress to help provide flexibility in school lunch programs, while still focusing on nutritionally balanced meals. I have been contacted by school food service administrators in my state of Wisconsin, who are concerned about the time it has taken for USDA action on regulations for the law. This delay has an impact on their planning for the next school year. Can you provide an update on the status of the regulations and a timeline for implementation.

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Answer. A proposed regulation to incorporate the traditional meal pattern into the program regulations and to provide guidelines for authorizing other reasonable approaches to meal planning is in clearance. Since clearance procedures are quite extensive, it is difficult to predict exactly when the rule might be published, but the Agency anticipates that it will be available for public comment by late spring or early summer.

In the meantime, it is worth noting that schools are already able to continue to use the traditional meal pattern if they so choose, since the Department issued guidance on this provision promptly after the enactment of the Healthy Meals for Children Act. In fact, schools currently have unprecedented ability to choose a meal planning system that is right for them. Schools may select from two food-based meal patterns as well as two methods of planning and preparing meals using nutrient analysis. The Department is committed to authorizing other reasonable approaches that can ensure the nutritional integrity of meals served to children and the best use of Federal dollars.

QUESTIONS SUBMITTED BY SENATOR LEAHY

WIC FARMERS' MARKET NUTRITION PROGRAM

Question. I am a very strong supporter of the WIC farmers' market nutrition program since it helps farmers, it helps communities set up farmers' markets, and provides fresh farm products to WIC families. The President requested a funding increase to \$12 million for fiscal year 1998—which I support.

While Vermont participates in this program, I want to make certain that additional states are able to participate in this program. Will you work, if Congress appropriates sufficient additional funding, to help make sure that the benefits of this program reach more states?

Answer. Yes, FCS will continue to work with the National Association of Farmers' Market Nutrition Programs and our Regional offices to provide information on the program to nonparticipating States. FCS conducts a State Plan workshop every year at a National farmers' market meeting in order to provide guidance to potential new States on applying and completing a State Plan for the program. Additionally, the Agency works with our Regional offices in order to assist States in the application process. When FCS participates in Departmental meetings or conferences regarding farmers or nutrition with individuals not familiar with the program, the Agency provides information about the program and encourages individuals to generate State support in order to apply. FCS realizes outreach is very important to potential new States and use many opportunities to promote this effective program.

Question. One preliminary report issued by USDA some years ago raised some concerns about the WIC farmers' market nutrition program. Are you now convinced that this program is a good investment for farmers, for WIC participants and for rural communities?

Answer. The Department is very supportive of the WIC Farmers' Market Nutrition Program (FMNP). The FMNP supports local agricultural economies consisting primarily of small resource farmers. At the same time, the FMNP promotes the consumption of more vitamin- and fiber-rich fresh fruits and vegetables. The FMNP couples incentives for local agricultural producers with incentives for WIC participants to make healthy food choices. The FMNP's direct linkage of farmers and consumers has helped participants become acquainted with where their food comes from, to meet the people that grow it, and to appreciate new and different types of fresh produce. FCS believes the FMNP is a win-win situation for both farmers and WIC participants.

WIC INFANT FORMULA REBATES

Question. For each year starting in 1987 please list the amount of dollar savings (in effect, additional funds for use by the WIC program) generated by WIC infant formula cost containment procedures which were put in place because they were either permitted or required under federal statutory law (1987 and 1988) or were required by federal statutory law (1989 through present). Also, please estimate how many additional persons were able to be served through these recaptured funds for each year.

Please break this down on a yearly basis and please do not include cost containment savings for other WIC food items such as cereals.

Answer. Infant formula rebates received reduce the cost of infant formula, thereby allowing the program to serve additional participants per month within its annual appropriation. Provided for the record is a break down of the infant formula rebates

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the WIC Program has received since fiscal year 1988 and the additional participation the program was able to serve. The amounts reflect rebates for all WIC foods earning rebate dollars as infant formula rebates are not tracked separately. However, the vast majority of rebate savings are associated with contracts for infant formula.

[The information follows:]

Fiscal year	Rebates	Estimated participation increase due to rebates
1987	(¹) .....	.....
1988	\$32,000,000	61,658
1989	293,000,000	548,945
1990	510,000,000	876,800
1991	656,000,000	1,087,715
1992	755,000,000	1,223,970
1993	880,000,000	1,407,139
1994	997,000,000	1,553,474
1995	1,051,000,000	1,620,981
1996	² 1,180,000,000	1,792,012

¹ Not available.

² Rebates reported by State agencies as of 2/24/97.

FOOD STAMP EBT SYSTEMS

Question. For years I have supported the elimination of the use of paper food stamp coupons in favor of electronic benefits transfer systems. I know USDA is making progress in this area. However, I think more effort needs to be made or more incentives need to be offered to states to get them to use EBT.

What concrete steps will USDA take to more greatly promote the use of EBT instead of food stamp coupons?

Answer. FCS does not believe that a greater promotional effort for use of EBT is needed at this time as most States are already well positioned to have systems in place by the end of fiscal year 1999—the Vice President’s goal for EBT implementation. However, the Agency will continue to provide technical assistance to these States, as well as the remaining States, to assist in the meeting of the 1999 goal. The Agency will approach the committee at a later time if any unforeseen difficulties are encountered in realizing this goal.

Question. While I voted against the welfare reform cuts in nutrition programs, I want to make certain that they are implemented properly by the states.

Do you need additional research funds to make certain that states implement these changes correctly and properly? If your answer is affirmative, please indicate what amount of funding would permit you to determine and monitor whether the state agencies are in compliance with the new rules?

Answer. Yes, additional research funds are needed to help States put programs in place that not only comply with the new rules but which also most effectively promote personal responsibility, reward work, and improve nutrition and health.

FCS plans to use some of the funds appropriated for 1997 to begin to address the policy information needs raised by welfare reform, but much more could be done. Continued funding at the fiscal year 1997 level will limit the Agency’s ability to provide solid, policy-relevant information to the States and to Congress. The research funding requested in the President’s budget will enable FCS to address a broader range of policy information needs.

For example, with the requested funds, FCS would be able to help States identify effective and efficient ways to design and run programs using the new flexibility provided by welfare reform. FCS would like to know what works best in moving clients to self-sufficiency, which State work programs are most effective in moving the able-bodied into work, how States can take advantage of new options to increase child support payments, encourage personal responsibility, and reward work. There is also a need to understand how these changes affect the nutrition status of people the programs are intended to serve.

In addition, with the requested funding, FCS would be able to respond more fully to the Congressional mandate to study the effects of welfare reform on the Child and Adult Care Food Program. Without these funds, FCS will not be able to address many critical questions posed in the legislation. Moreover, FCS will not be able to

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address key questions about the availability of care in targeted areas and the importance of this program in supporting the transition from welfare to work.

FOOD PROGRAM ADMINISTRATION MISSIONS

Question. You made some very strong arguments for additional staff to administer the nutrition programs and carry out your many missions. I am very concerned about the cuts which were made in your staff while your responsibilities greatly increased.

You are responsible for over 70 percent of the USDA budget expenditures yet you represent a very small fraction of the total USDA staff.

I am worried that this will interfere with your ability to prevent or investigate fraud, to carefully monitor State and store compliance with the rules, to properly implement program changes, and to carry out other functions.

Please advise us about any potential needs you have for increased appropriations for staff.

Answer. FCS needs to maintain its current staffing level. Our fiscal year 1998 budget request only asks for a minimal increase to fund half of the mandatory pay increases to support existing staff. In recent years, the President has requested more staff and funding than the Agency received in the appropriations, and this reduction in resources has put the Food Assistance Programs at increased risk.

Staffing levels have diminished from 2,762 in 1980 to 1,750 today. During the same time, demands on FCS staff have dramatically increased. FCS certainly understands how important downsizing is to the Federal government, especially to balance the budget, and the Agency is committed to the National Performance Review and the Vice President's goals of reducing the Federal workforce. To that end, FCS has been diligent in implementing efficiencies, such as eliminating unnecessary operations and overlap, capitalizing on information technology, encouraging teamwork, and paring back services to employees to the minimum necessary.

Despite all this, the cuts to FCS have been significant. The Agency reached its fiscal year 1999 streamlining target 3 years ago. Since fiscal year 1995, FCS has had to reduce its staff by 60 to 80 staff years every fiscal year due to funding reductions in the Food Program Administration (FPA) account. This has had an impact on FCS in two key areas.

First, reductions are affecting the Agency's ability to properly monitor and oversee the Food Assistance Programs and provide technical assistance to State agencies. Due to funding reductions, FCS has curtailed efforts that are crucial to monitoring sites and maintaining Federal presence in the field. Staffing reductions have placed highly labor-intensive activities such as store investigations and maintaining program integrity at risk—a reduction in the National Food Stamp error rate of just 1 percent can result in savings of over \$230 million, which is much more than paying for the staff needed to provide the proper oversight. FCS feels that the cost of funding additional staff in the FPA appropriation is millions of dollars less than the cost of increased fraud and abuse in the programs. Meanwhile, external audits from GAO and OIG have consistently cited insufficient staff to exert proper oversight of State administrative costs and debt management practices. If Congress does not maintain funding for the current staffing levels, these important activities will suffer further.

Second, the reductions in staff are affecting FCS' ability to adequately respond to program changes. FCS employees are forced to react as crises arise, rather than look ahead and plan for the future. The Agency is too busy attempting to remedy predicaments as they occur and has little or no time to foresee potential problems and address them early on to head off a crisis. Implementing new legislation, such as Welfare Reform and the Healthy Meals for Healthy Americans Act, impose significant, new, and ongoing administrative burdens on FCS. These new laws effect comprehensive program changes and are extremely important to the Food Assistance Programs. The CFO Act, the Government Performance and Results Act (GPRA), and Nationwide implementation of EBT are other examples of program changes to which the Agency is required to devote resources.

FCS asks that you at least maintain our current staff level. Mandatory pay raises increase the cost of each staff year every fiscal year, so maintaining current staff levels requires small increases in the FPA appropriation. If FCS must absorb the cost of increased salaries, the only option is to further reduce staff. Eighty-five percent of the FPA appropriation is for salaries alone, leaving us little flexibility in absorbing new costs. The remaining 15 percent is used for travel, training, and other expenses, such as rent, computer support, and supplies, all of which have been reduced to the minimum necessary. FCS wants to administer the programs as Con-

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gress has intended, meet mission goals, properly respond to new initiatives, and protect government funds from fraud and abuse.

The results of your support to the FCS staff will benefit all involved—the needy, American children, taxpayers, as well as Congress. The minimal funding it will take to support the staff will provide America with programs that truly help those less fortunate, that respond appropriately and effectively to new needs and changing legislation, and that operate efficiently with savings to the taxpayer.

SUBCOMMITTEE RECESS

Senator COCHRAN. This will conclude our hearing today. We appreciate the attendance of all witnesses.

Our next hearing will be on the budget request of the Department of Agriculture's Natural Resources Conservation Service, the programs and activities under that agency. That hearing will be at 10 a.m. on Tuesday, March 18.

At 2 p.m. on Thursday of this week, we will have a special hearing to explore alternatives to the dairy pricing system. Those hearings will be held in room SD-138 of the Dirksen Senate Office Building.

Until then, the subcommittee stands in recess.

[Whereupon, at 11:46 a.m., Tuesday, March 11, the subcommittee was recessed, to reconvene at 10:11 a.m., Tuesday, March 18.]

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AGRICULTURE, RURAL DEVELOPMENT, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1998

TUESDAY, MARCH 18, 1997

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:11 a.m., in room SD-138, Dirksen Senate Office Building, Hon. Thad Cochran (chairman) presiding.
Present: Senators Cochran and Bumpers.

DEPARTMENT OF AGRICULTURE

STATEMENT OF JAMES R. LYONS, UNDER SECRETARY, NATURAL RESOURCES AND ENVIRONMENT

ACCOMPANIED BY DENNIS KAPLAN, DEPUTY DIRECTOR, OFFICE OF BUDGET AND PROGRAM ANALYSIS

NATURAL RESOURCES CONSERVATION SERVICE

STATEMENT OF PAUL W. JOHNSON, CHIEF

ACCOMPANIED BY:

GARY A. MARGHEIM, ACTING ASSOCIATE CHIEF AND ACTING DEPUTY CHIEF, SCIENCE AND TECHNOLOGY

THOMAS A. WEBER, DEPUTY CHIEF, MANAGEMENT

LAWRENCE E. CLARK, DEPUTY CHIEF, PROGRAMS

CAROLE JETT, ACTING DEPUTY CHIEF, SOIL SURVEY AND RESOURCE ASSESSMENT

FEE BUSBY, DEPUTY CHIEF, SCIENCE AND TECHNOLOGY

ROBERT K. REAVES, DIRECTOR, BUDGET PLANNING AND ANALYSIS DIVISION

OPENING REMARKS

Senator COCHRAN. The subcommittee on appropriations for the Department of Agriculture and related agencies will come to order.

This morning we continue our hearings, reviewing the President's budget request for the Department of Agriculture and other agencies that come under the jurisdiction of this subcommittee.

This morning we are happy to have representatives of the Natural Resources Conservation Service [NRCS]. James Lyons, the Under Secretary for Natural Resources and Environment is here, along with Paul Johnson, Chief of the Natural Resources Conservation Service and others.

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We welcome you, and we thank you for your cooperation with our committee, and for the statements that you have submitted, along with other materials from the President's budget that are helpful to us.

And, Mr. Lyons, we ask you to proceed after I first yield to my colleague, the distinguished Senator from Arkansas, who is ranking member of this subcommittee for any comments that he would have to make.

Senator Bumpers.

Senator BUMPERS. Thank you, Mr. Chairman. In the interest of expediting this, I will forgo an opening statement.

Senator COCHRAN. Mr. Lyons, you may proceed.

OPENING REMARKS BY UNDER SECRETARY LYONS

Mr. LYONS. Well, thank you very much, Mr. Chairman and Senator Bumpers, it is a pleasure to be here this morning.

I am joined today by, of course, Paul Johnson, Chief of the Natural Resources Conservation Service, Dennis Kaplan, and his staff. And also with me, I want to mention Larry Clark, Deputy Chief of Programs; Bob Reaves, from the NRCS budget shop; and Tom Weber, the Deputy Chief of Management who works with me on conservation issues.

Mr. Chairman, NRCS, of course, is an agency that has a long and, I think, successful history of helping farmers, ranchers, and local communities change the face of this land; helping them to practice conservation and manage their operations as stewards to protect the natural resources that we all care very dearly about.

Several things have made this success possible, not the least of which has been the support of this committee, which has given cause to conservation and I think demonstrated true commitment to protecting the productivity and the stewardship of the Nation's private lands. We appreciate your leadership in that regard.

But perhaps the most important reason for the success we have realized within NRCS is really attitude, a principle that the agency's focus should be aimed high on the objective of doing what is needed to help farmers, ranchers, and communities produce as many environmental benefits as they can while meeting the Nation's, in fact, the world's needs for food and fiber.

Mr. Chairman, that is exactly what the budget we are here today to discuss is about. What resources does it take? With today's changing technologies and challenges, for NRCS to be able to work effectively and in partnership with conservation districts and our other Federal, State, and local partners, to help agriculture produce not only food and fiber, but clean water, productive and high-quality soils, ample wildlife habitat, and many of the other environmental benefits that we in this country care about.

What does it take to help American private lands fulfill their promise, as Chief Johnson has said, to make them truly a geography of hope? These are key questions we had in mind as this budget was put together, and that we encourage this committee and the Congress to remember as you work out the details of our 1998 budget.

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We believe that this budget, structured and constrained as it is, due to our joint commitment to balance the budget, answers many of these questions.

The budget retains its emphasis on conservation operations as the key to getting conservation on the land, asking for increases to cover some of our pay costs, and in particular to increase the level of work on private grazing lands, increase the rate at which we are converting our operations to geographic information systems, and to enhance our ability to provide watershed-based planning assistance.

It is through conservation operations that our people are able to join with the conservation districts throughout the country to work on the national resource concerns and challenges that people at the local level care about and need to see addressed.

In today's budgetary world, which demands performance-based programming, it will be through conservation operations that we anticipate seeing the greatest benefit from NRCS' locally led conservation initiative, which is intended to energize and focus our efforts with our local partners and allow us to report to you and the country on exactly how our partnership is doing over time.

It is also through conservation operations that we will do the critical work of implementing the conservation compliance and swampbuster provisions of the Food Security Act.

NRCS' locally led initiative also will do something else. It will help guide and shape to the fullest extent possible every USDA conservation program activity at the State and local level.

This is our intent with the Small Watersheds Program, the new Environmental Quality Incentives Program, the Conservation Reserve Program's continuous signup for buffer and filter strips; the Wetlands Reserve Program, FIP, as well as the new Wildlife Habitat Incentives Program and the Farmland Protection Program.

All of these programs are either up and running or close to it. We are moving aggressively to prepare rules for EQIP, WHIP, and the other programs that have been authorized by the 1996 farm bill.

We are excited about the opportunity to work in partnership with the conservation districts and other local conservation leaders to put these programs to use.

Mr. Chairman, I think the 1996 farm bill was not only a historic farm bill, but probably the first ever conservation farm bill of its kind. Conservation clearly led the charge, and was the driving force to enactment of that legislation. Of course, you and Senator Bumpers played a critical role in that.

We see the conservation title as affording us a much broader toolkit than we have ever had before, to do the kind of work that we need to do across the landscape, to help farmers and ranchers and others in the community meet their needs and protect the resources they care dearly about.

Conservation operations is the key to ensuring that we have the people on the ground, the resources available to put that toolkit to use and to work closely with landowners and others to meet their overall conservation goals.

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Another prime example of a program that makes effective local action possible is the Resource Conservation and Development Program, or the RC&D Program.

Federal contribution to the RC&D Program is small, simply the salaries of local coordinators. But this investment gets this country much in return in the form of local initiative and a commitment of funds to develop and enhance economic activities.

This budget asks for an increase for RC&D of \$18 million, designed to help this program make a much greater contribution in watersheds needing assistance for work such as salmon head habitat recovery work in the Pacific Northwest. We stand ready to work with you on this proposal and to shape it to meet our overall needs and objectives.

One of the things that is so amazing and exciting about all of this is the fact that USDA and NRCS can even conceive of helping to make locally led conservation happen at the State and local level.

Agriculture has created a State and local delivery system that is the envy of all the other Federal agencies and a model for the world. When it comes time to get real work done on the ground on private lands, whether it is in times of emergency and crisis such as the floods we are seeing now, or in the times of normal need, it is this delivery system that people turn to.

This is truly a national asset of tremendous value, Mr. Chairman. And I believe we all owe a debt of great gratitude to those that came before us in Congress and in agriculture that have made it possible.

Mr. Chairman, as I said before, in all of this we have sought to create a budget that can really help agriculture on this country's private lands, realize the promise of a geography of hope.

I am sure that this is a goal that you and the members of the committee can support. We certainly look forward to working with you over these next several weeks and months as you finalize the budget and seek to make reaching this objective possible.

Thank you, Mr. Chairman, again for the opportunity to appear before you today, and we will certainly do our best to answer any questions you may have.

PREPARED STATEMENT

Senator COCHRAN. Thank you, Mr. Secretary. We have your complete statement, and it will be made part of the record.

[The statement follows:]

PREPARED STATEMENT OF JAMES R. LYONS

Mr. Chairman, Members of the Committee. It is my pleasure to outline for you the fiscal year 1998 budget request for the Department of Agriculture's Natural Resources Conservation Service (NRCS).

In the past month, Secretary of Agriculture Dan Glickman conveyed to each of you and all other members of Congress a copy of a new publication from NRCS. This publication, "America's Private Land, A Geography of Hope," articulates a new view of private land in America, most of which is in an agricultural use, and what we might refer to as our "working land." As the introduction of the publication suggests, people's relationship to the land has changed. Few Americans now live and work on farms and ranches. Most of us live in cities and suburbs. But what happens on our private land remains crucial to our economic and environmental well-being. We are reminded of our connection to the land every time we buy a loaf of bread,

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turn on the tap for a drink of water, or admire a flock of ducks or geese heading south in the fall.

Seventy-percent of the land in the United States, exclusive of Alaska, is held in private ownership. About half of this land—907 million acres—is cropland, pasture, and rangeland. The stewardship of these particular acres lies in the hands of fewer than 5 million individuals, which means the care of 50 percent of our land is in the hands of less than 2 percent of our citizens.

We rely on these fellow citizens and neighbors to produce the food and fiber we need, which they do exceedingly well. Our food prices remain the lowest in the industrialized world, and our agricultural industry contributes significantly to export revenues. But these farmers and ranchers, through their care of private land, produce much more than food and fiber. The products of their land also include safe drinking water, healthy soil, clean-flowing streams, valuable wildlife habitat, and scenic landscapes. We don't buy these commodities in the supermarket, and their prices are not listed on the Chicago Board of Trade, but most Americans value them just the same.

Realizing the importance of protecting private land and private landowners, our nation's policy-makers have made significant commitments over the years to conservation. Those commitments began in the 1930's in response to the devastating Dust Bowl. Today, in spite of important conservation gains over the past decade in particular, soil erosion remains a threat on 1 in 3 acres of cropland, water quality and supply problems confront many communities, and we have grown increasingly concerned about the loss of wildlife habitat and the conservation of biodiversity.

Fortunately, we have a number of new, voluntary, incentive-driven tools in the 1996 farm bill that should allow us to extend the important conservation gains of the past decade. To do so, however, will require a continued, if not renewed, commitment to private land and private landowners. We cannot afford to tell landowners that stewardship is their concern alone. Stewardship involves a shared responsibility between public and private interests alike.

The following budget request, therefore, strives for a balance in spending that will provide farmers and ranchers with sufficient financial incentives for conservation work, including targeted land retirement, while ensuring that sufficient resources are made available to USDA and NRCS for conservation operations generally and technical assistance in particular. A budget of this magnitude will allow us to continue to work cooperatively with state conservation agencies, local conservation districts, and our agency's many other public and private-sector partners in assuring an adequate measure of conservation on our Nation's working land.

The following table shows the major items in this year's budget request and contrasts them with the comparable figures from the two prior fiscal years.

[In thousands of dollars]

Appropriation	Fiscal year—		
	1996	1997	1998
Conservation operations	629,794	619,961	722,268
Wetlands Reserve Program	77,000	.....	.....
Watershed and flood prevention operations	180,514	164,036	40,000
Resource conservation and development	29,000	29,377	47,700
Watershed survey and planning	14,000	12,381	.....
Colorado River Basin Salinity Control Program	2,681	.....	.....
Forestry Incentives Program	6,625	6,325	6,325
Outreach for socially disadvantaged farmers	N/A	¹ 5,500	5,000

¹ Includes \$4.5 million allotment from the Fund for Rural America.

Now, let me describe how NRCS differs from other federal agencies and summarize for you the agency's role. I will also outline the major programs NRCS administers and describes not only some of the things we have achieved with the help of our partners at state and local levels, but also some of what have planned.

STRATEGIC ASSETS OF THE NATURAL RESOURCES CONSERVATION SERVICE

NRCS provides natural resources conservation assistance primarily on private lands. More than 70 percent of the land in the contiguous United States is privately owned, including virtually all of the Nation's agricultural lands. It is on the private lands where millions of individual decisions are made by farmers and ranchers, that the ultimate success of the majority of our natural resource efforts will succeed or

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fail in helping meet the twin goals of productive agriculture and an economically and environmentally sustainable future.

NRCS is the only Federal agency whose major purpose is to provide consistent technical assistance to private landusers across the country. The agency's focus is on helping landowners and users achieve natural resource and environmental goals while maintaining productive and profitable operations and economically viable rural communities. NRCS has had some significant successes in the past, and the structure is designed to continue that success in the future. Let me describe some of the agency's assets in light of the implementation of the USDA Reorganization Act of 1994, including the Department's Field Office Streamlining efforts.

—*Delivery system.* NRCS has a nationwide network of professionally staffed local offices that provide conservation technical assistance to owners and users of privately-owned land. This nationwide delivery system is based on a partnership that combines a federal natural resource presence at the local level with locally sponsored and controlled conservation districts and their employees. This conservation infrastructure is interwoven and interconnected at the local, State, and Federal levels with complex relationships and program support systems that are interdependent. Local service will be continued, but with the reorganization and consolidation of field offices, this operation will be more efficient and enable our field staff to provide the kind of site-specific technical assistance individual private landowners need and want.

—*Technical skills.* NRCS' natural resource specialists are trained to deliver technological support to groups and individuals quickly, efficiently, and consistently nationwide. By regionalizing NRCS, our technical staff will be able to apply their knowledge of soil science, engineering, landscape architecture, agronomy, biology, range management, economics, geology, and other fields with a much greater degree of sensitivity to local conditions. NRCS field offices and staff working in partnership with the local conservation districts are used as a primary source of help by local people—and often by people administering programs for other Federal, State, and local agencies. About 9,000 staff are located at these offices.

—*Technical excellence.* Throughout government and private industry, NRCS specifications for soil and water conservation practices are the national standard. In addition, the agency is the leader in soil classification and soil mapping. Recently, in recognition of the vital importance of soil quality, NRCS has made a commitment to better understand and emphasize the fundamental role of soil quality.

—*Natural resource planning experience.* NRCS has vast experience in broad-scale planning in watersheds and other areas and site-specific planning on farms and ranches to address natural resource concerns. Effective natural resource planning in the future will require this type of planning process to develop effective solutions that meet the needs for a sustainable land and its people. NRCS is now serving as a catalyst by providing coordination to bring local people together with skilled technical people to develop and implement meaningful solutions. These planning efforts are provided through the Watershed Survey and Planning Program, the Resource Conservation and Development (RC&D) Program, and Coordinated Resource planning provided through Conservation Operations.

—*Partnerships and volunteerism.* Since its creation, NRCS has operated through voluntary cooperative arrangements with individuals, the private sector, and Federal, State, and local governments. The value of NRCS technical assistance is recognized by local and State partners; equally, we recognize the invaluable contribution of volunteers, who contribute immeasurably to conservation efforts. Americans from all walks of life have freely and generously given of their time to the volunteer arm of NRCS, known as the Earth Team. In fact, in fiscal year 1996, some 14,748 NRCS Earth Team volunteers donated 530,854 hours to conservation efforts. As calculated by the Points of Light Foundation, this equates to an additional \$6,400,000 in direct assistance to private landowners and national resource protection.

—*Local people as decision-makers.* When NRCS delivers conservation and program assistance, the agency works under cooperative agreements with some 3,000 conservation districts that are established under state law. About 17,000 local conservation district supervisors provide the agency with invaluable guidance. The NRCS cooperative team structure is an established and practical example of how Federal programs can be managed with local guidance at the local level. It is crucial to remember that the agency's approach is a voluntary one. Our professionals provide options for problem-solving—developed in conjunction with customers, but it is the customers who make the final decisions.

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—*Leverage.* State and local governments contribute substantially, with both people and dollars complementing NRCS technical assistance. In fiscal year 1997, State and local governments spent over \$500 million on conservation—a considerable increase from the \$247 million spent a decade ago. Without NRCS technical assistance, which greatly enhances the value of State and local efforts, these funds almost certainly would not have been spent on natural resource protection. In a sense, this cooperation constitutes a two-way leveraging: State and local programs and NRCS benefit from each other's involvement.

USDA REORGANIZATION

A major goal of this Administration has been to “reinvent government” so it works better and costs less, cutting waste and reducing bureaucracy. The National Performance Review (NPR) process, challenging all areas of the Federal Government to do a comprehensive bottom-up review of operations, resulted in innovative and creative ideas on how we ourselves could make necessary and appropriate improvements in the way our agencies do business. Taking these good ideas and incorporating additional improvements, Congress authorized USDA reorganization in the “Federal Crop Insurance Reform and Department of Agriculture Reorganization Act of 1994”. With this action, NRCS was given the green light to develop an implementation plan for these exciting new ideas.

In December of 1994, after extensive public input, NRCS unveiled its far reaching reinvention plan which is targeted for full implementation by 1999. In addition to the field office closings and consolidations previously announced by former Secretary Espy, the plan called for major restructuring above the field office level. The proportion of NRCS staff at the field office level will increase from the current 70 percent to 80 percent; operational functions are being delegated to the lowest level possible; headquarters operations are being reduced by over 50 percent; science and technology will be focused on areas important to our mission through the establishment of more than six NRCS Institutes which will improve our capabilities in areas such as grazing lands, natural resource inventory, wetland science, social science, watershed science, and soil quality; the ability of NRCS to address multi-state natural resource and program delivery issues is being improved through the establishment of regional offices; technical support functions are remaining strong and becoming better focused by being moved closer to where programs are carried out; and administrative and other support activities are being thoroughly reviewed for continued improvement in efficiency and better focused to support a modernized agency.

By October 1, 1995, all areas of the NRCS reorganization plan were in full implementation. This included all agency personnel knowing their new role, Regional Conservationists in place and operational, technical functions reassigned closer to the field, and the transfer of programs such as the Wetlands Reserve Program and Forestry Incentives Program completed, as provided in the 1994 Act. Further, NRCS field office streamlining efforts were fully under way with the Department, as we begin the multi-year process of moving from the historical field offices to field service centers.

This has not been an easy process, especially from the standpoint of the agency's most important resource—our employees. I am pleased we have been able to use the tools necessary, including authorities from Congress, to meet our goals without overly impacting our employees and their careers. I am indeed proud of how NRCS employees have embraced this change and have committed to seeing this reorganization completed—successfully. However, any change this massive cannot be without its bumps and mistakes.

We have learned a lot from the reorganization process as well, and have made further needed adjustments as identified. On January 30, 1997, further adjustments of the NRCS National Headquarters structure were approved by the Department. The changes are the result of recommendations and appraisals made one year after the agency-wide reorganization and from recommendations of our strategic planning and reports. Our new headquarters structure includes an increased emphasis on strategic planning and soil and natural resource assessment. Reflected in this, are a new Deputy Chief for Soil Survey and Resource Assessment and several realigned Divisions. We are encouraged by the results of the agency-wide reorganization and are equally optimistic that our present adjustments will render the agency better equipped than ever to tackle the mission ahead.

Now I will describe our programs and plans for fiscal year 1998.

PROGRAM EFFECTS AND THE FISCAL YEAR 1998 BUDGET REQUEST

Many programs provided by NRCS are a catalyst for local investment and as a result, enhance local economic activities. Other programs provide services that are

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voluntary in nature, and not available or provided by other government or private entities. These programs and activities are an essential component of the conservation fabric of the Nation. I will briefly highlight several for you.

Conservation operations is the foundation for most of the agency's activities. These activities are carried out through the conservation infrastructure, a complex array of local, State, and Federal agencies and organizations and local people working together for natural resource protection. The relationships are complex and NRCS is an integral part of these local, State, and Federal interdependent program support systems. Many grassroots programs and initiatives are funded by conservation operations. Several are described below.

Conservation Technical Assistance is the cornerstone for most agency activities. The fiscal year 1996 appropriations were \$538,904,000; and the fiscal year 1997 comparable appropriations are \$528,892,000, and the fiscal year 1998 budget request is \$549,241,000. As stated previously, this difference over fiscal year 1997 is due in large part to uncontrollable costs from inflation and pay costs, and costs to relocate NRCS operations to the USDA Service Centers, and the increased program responsibilities associated with implementation of the conservation programs of the Federal Agricultural Reform and Improvement Act of 1996 (1996 Act). During 1998, the Natural Resources Conservation Service will continue to provide technical assistance on prior year projects as needed for the Colorado River Basin salinity Control Program and ongoing activities of the Great Plains Conservation Program.

Conservation technical assistance provides assistance to private land users, communities, units of State and local government, and other Federal agencies for planning and implementing solutions to natural resource problems. This technical assistance is the cornerstone for locally-led conservation efforts that are conducted in partnership with state, local, and tribal governments, including conservation districts; private groups of farmers and ranchers; and environmental groups. In the past decade, major strides have been made in reducing erosion; improving soil and water quantity and quality, air quality, pasture and range conditions; improving and conserving wetlands and woodlands; enhancing fish and wildlife habitat; and reducing upstream flooding. This assistance is based on voluntary local landowner cooperation and recognizes the value of educational, technical, and financial assistance. These principles apply as we are responding to individual needs, local goals, and to nationally determined priorities. Still, more remains to be done. Also, because neither agriculture nor the environment is static, and both are constantly changing, the agencies and programs need also to be constantly evolving.

During fiscal year 1996, NRCS assisted approximately 814,000 private landowners in preparing conservation plans and implementing conservation systems, as well as providing assistance to units of government in developing area wide conservation plans and goals. This resulted in conservation treatment on over 100 million acres of land, including cropland, rangeland, pastureland, woodland, and other land.

Urban Conservation is an additional area for which we are particularly proud. It is an area for which I have taken particular interest and believe that we are making significant gains. While, much of my remarks have focused upon rural land to this point, it is the mission of NRCS to provide assistance to all of our nation's private land including urban, and suburban communities. Four years ago, the Department of Agriculture initiated an Urban Resources Partnership (URP). This is an effort which NRCS is co-leading to provide conservation assistance to the communities that need it most—urban and urbanizing areas. We are proud to report that over 4,000 non-profit and community-based organizations receive financial support and technical educational assistance from URP. Communities are responding with enthusiasm and have matched federal financial assistance with over fifty percent matches. We have eight major metropolitan cities under the program including New York City, Chicago, and Los Angeles. In these pilot cities, NRCS field staff provide assistance in a diverse range of projects from community gardening and forestry, to education of youth about soil science and the urban watersheds in their community.

But our work in this area only begins here. NRCS employees support numerous urban pilot cities and provide agency expertise on urban resource concerns. As many of you know, the nation's most productive farmland is located in our near urbanizing areas. NRCS staff address issues of "farming on the fringe" and help mitigate some of the difficult concerns that arise when agrarian and community interests are at odds. Through the Land Evaluation and Site Assessment system, NRCS staff provide advice to local government officials on land-use and zoning decisions. In addition, we provide planning support to landowners to remediate air and water quality concerns of their neighboring community. These services are all provided as part of the conservation technical assistance available to everyone.

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Highly Erodible Land Conservation (HELC). Since 1985, the Agency has devoted a significant portion of its technical assistance resources to helping farmers and ranchers meet the highly erodible land conservation provisions. With NRCS technical assistance, more than 1.7 million plans have been prepared covering about 142 million acres of highly erodible land, and 95 percent of those plans were implemented by the mandated deadline of December 31, 1994. Between 1985 and 1995, technical assistance was provided to an average of over a million decision-making land owners and users each year; one result is that soil erosion has been reduced by over a billion tons annually. By the end of fiscal year 1995, all the highly erodible plans were installed. The 1996 Act provided amendments that have reduced the burden of complying with the HELC provisions and have provided USDA with additional tools to use in working with producers. However, all producers who receive USDA program benefits must be fully applying a conservation plan on highly erodible land. Therefore NRCS assists producers in developing plans for land that they acquire and in making changes in their current plans so that their plan may reflect changes in cropping systems, weather conditions, and economic incentives. Our experience has shown that approximately 20 percent of producers will change their conservation systems each year. This figure may be slightly higher in the next few years as producers begin to respond to market signals as a result of the Agricultural Market Transition Act Program (AMTA). The 1997 enrollment in AMTA generated requests to NRCS for 137,234 highly erodible land determination on fields, 79,225 new conservation plans, and revisions on 146,239 conservation plans.

Preliminary 1996 Status Review data show that approximately 48 percent of farmers have conservation systems that are at sustainable levels of soil loss or levels that allow soil to be created at a faster rate than it is lost. With the amendments provided by the 1996 Act, NRCS will be ensuring that new conservation systems provided to farmers and ranchers result in a substantial reduction in soil erosion.

Wetland determinations and certifications. On January 6, 1994, four Federal agencies with wetland protection responsibilities signed an historic Memorandum of Agreement recognizing NRCS as the lead Federal agency for wetland determinations on agricultural lands. Farmers now turn to NRCS for determinations that identify the extent of wetlands under both the swampbuster provisions of the Food Security Act of 1985 and Section 404 of the Clean Water Act. This new responsibility brought increased commitment of staff resources to provide prompt, accurate, and effective service to our Nation's agricultural land owners and users.

Both the 1990 and 1996 Farm Bills called for the Secretary to "certify whether a map is sufficient for the purpose of making a determination of ineligibility for program benefits." This was interpreted to mean the review and certification of previously made wetland determinations. In 1991, the certification process was put on hold because of dialogue surrounding which version of the Corps of Engineers delineation manual was appropriate. Because of this debate, Congress commissioned the National Academy of Sciences to do a study and determine the appropriate definition of a wetland. In 1994, the National Academy of Sciences completed its work and affirmed the 1987 version best identified wetlands.

However, in April of 1995, the Secretary decided it was necessary to suspend all wetland determinations unless specifically requested by the client, or when a potential violation occurs. This decision resulted from the prospect of legislative changes in the Food Security Act of 1985 (1985 Act). The legislative changes to the 1985 Act generally reduced the cumbersome elements of compliance, while protecting wetland functions and values. The Food Security Act also provided that certified wetland delineation's will remain in effect until such time as the landscape is changed by natural events. All current determinations are frozen and the process of providing wholesale wetland resource information to customers is on hold, unless a determination is specifically requested. Landowners have continued to request a number of certified wetland determinations and these requests are expected to increase as these issues continue to play themselves out in Congress. The enrollment in Agriculture Market Transition Act (AMTA) generated requests to NRCS for approximately 25,417 wetland determinations.

The 1996 Act also required the Secretary to permit persons to secure technical assistance from approved sources, in addition to those services available through the NRCS. Other sources were not previously restricted; however, language in the 1996 Act now implies that a certification for measurement of crop residues and an approval process for conservation planning and implementation process are required. State Conservationists, in consultation with the State Technical Committee, are establishing methodologies for third parties to use to measure crop residue. NRCS and others will hold training sessions for interested persons in accordance with guidance. Upon completion of training, and after all requirements are met, third parties

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will be deemed “certified.” Producers may participate in training, but training is not required.

Certification or approval status only reflects that person(s) or groups have presented written assurances that they possess technical qualifications. Neither NRCS nor USDA will warrant or guarantee the quality of work done by third party providers of technical assistance. NRCS is, also, working with certification registries and associations to ensure that certification programs for approval of commercial sources of services reflect skill levels necessary to meet technical assistance needed.

Grazing Land Conservation Initiative (GLCI). This grassroots-driven initiative has helped NRCS better define the resource needs and benefits generated when grazing lands are improved. NRCS has been requested by this group to continue technical assistance to livestock producers on private grazing lands. Grazing lands include rangelands, pasture, hayland, and grazed forestlands. The latest 1992 National Resources Inventory (NRI), shows that grazing lands—mostly rangeland and pasture—represent 642 million acres, or almost half of the non-Federal lands in the United States.

The NRI analysis of range vegetation shows that over 15 percent of non-Federal rangelands are in poor condition; over 44 percent are in fair condition; 34 percent in good condition; and only 6 percent in excellent condition. The NRI indicates that 75 percent—nearly 299 million acres—of non-Federal rangelands need conservation treatment. Properly managed grazing land represents a renewable resource for producing food and fiber. Vegetative cover on well-managed grazing lands contributes to: 1) increased water quality and quantity; 2) improved wildlife habitat; 3) reduced soil erosion and sedimentation; and 4) improved riparian areas. Conservation Operations will continue to support technical assistance for these unmet conservation needs and will provide additional assistance within current funding levels as the field level workload permits. In fiscal year 1997, NRCS was able to provide enough resources to this initiative to ensure each of the 50 states has access to a Grazing Land Conservation Coordinator. This will enable us to provide multi-resource technical assistance to support grazing lands conservation and water quality improvement on rangelands and begin the process of rebuilding the agency’s expertise in rangeland conservation, a capability demanded by our customers.

Service Center Implementation, a customer-oriented initiative within USDA, will continue in 1997 within currently budgeted funding levels. It will improve delivery of services in USDA field-delivery programs through improved business process re-engineering (BPR) and information systems integration. Service Center Implementation will coordinate planning, acquisition, development, implementation, and management of information technology resources. Service Center Implementation will benefit the agency and customer partnerships by: 1) providing one-stop shopping to multi-agency programs; 2) significantly reducing paperwork required of customers and employees; 3) facilitating data sharing; and 4) reducing repetitive requests for information.

One of the areas where BPR has resulted in significant positive change in a core NRCS business process is in the design, construction, and implementation of the agency’s Field Office Computing System (FOCS). This system, developed by re-engineering the natural resource conservation planning model, steps away from the single resource plan used for Food Security Act compliance with its intensive record keeping requirements, and enables a much more holistic, natural resources oriented planning process for protecting and enhancing soil, water, air, plants, and animal resources while preserving agricultural profitability for farmers and ranchers. Literally hundreds of employees, customers, and partners were involved in this five year effort that is now coming to fruition. FOCS and the core conservation planning process it automates will be merged into the concept of the USDA Field Service Center within the Service Center Implementation interagency business and information strategic plan.

New technology. Most of the natural resource information used by NRCS is referenced to a geographic location on the ground, and there is a need to put this data in digital form for more accessible use in a geographic information system (GIS) available at state and field offices. This budget proposed an increase of \$10 million to accelerate the purchase of digital orthophotography and data digitization. This will improve customer service by providing more usable and accurate information for use in natural resource planning and decision-making, and for environmental assessments and evaluations. It will also reduce duplicative work done with the same customers in the USDA Service Center. Currently, about 200 NRCS field offices are using GIS. We are embarking on an important review of the information NRCS collects to assure that it meets the real resource information needs of farmers and ranchers. As part of this effort, we also are working on improving interagency cooperation, and the ways in which we share and display natural resource, economic,

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and other data so they conform to the national GIS database standards. Increasing the availability of such data is necessary for USDA reorganization and reinvention at the field level.

Under the 1977 Resources Conservation Act (RCA), USDA, through NRCS, with the assistance of nine other Federal agencies, conducts and analyzes ongoing comprehensive inventories and assessments of the status, condition, and trends of America's natural resources on all non-Federal lands. This information is used by USDA, other Federal agencies, State and local governments, and other organizations to support agriculture and conservation policy development and program evaluation. NRCS is working to assure the RCA Appraisal addresses the distinct characteristics of the regions of the country. The agency also will be developing, in the next 18 to 24 months, the third National Conservation Program, also called for under the RCA.

USDA Centers of Excellence initiative. USDA will continue to work in partnership with the 1890 Land Grant Institutions and Tuskegee University, to develop low cost conservation systems to improve water quality and reduce erosion. USDA is establishing Centers of Excellence at the 1890 schools. NRCS and the 1890 Institutions have a history of cooperative ventures that have provided knowledge and skills necessary to strengthen and broaden the application of technologies to the limited resource and socially disadvantaged farmers they serve. It is economical and efficient to support the Centers of Excellence with the universities than developing that capacity within USDA. The focus of the proposal is to develop and evaluate sustainable ecosystems that would improve and protect water quality and quantity. NRCS will continue the current level of support for this initiative.

Assistance to American Indians, Native Alaskans and Pacific Islanders. Many of the more than 310 reservations covering more than 50 million acres in the 48 contiguous states, four areas of trust land, 12 Alaska Native Regional Corporations and 217 Alaska Native Villages have been requesting technical assistance. We estimate receiving 150 requests to establish tribal land field offices each year. Staff in those offices provide basic technical assistance for resource problem identification and conservation planning and application. NRCS plans to provide technical assistance and capacity-building assistance needed on a full-time basis on Indian lands that have significant natural resource problems, within the current funding level as workload in the field permits. This assistance will begin the process of developing local capacity in natural resources management by establishing an internship/self reliance program similar to the one in operation at the Wind River Reservation in Wyoming. Tribal employees will be trained through on-the-job and educational experiences as a conservation work force on Indian lands. No additional funds are requested for this activity for fiscal year 1998, but additional assistance will be provided to this high priority activity to the extent possible within requested funding levels.

Snow survey and water supply forecasts provide western states and Alaska with vital information on summer water supplies. The fiscal year 1996 appropriations were \$5,852,000; the fiscal year 1997 appropriations are \$5,835,000; and the fiscal year 1998 budget request is \$5,888,000. NRCS field staffs provide necessary leadership, standardization of procedures, and automation to a partnership of Federal, State, and local personnel to collect snow-pack data from more than 1,200 remote high mountain sites. Data are collected with many partners, including Conservation Districts, Bureau of Indian Affairs, Bureau of Land Management, Forest Service, the National Weather Service, Army Corps of Engineers, Bonneville Power Administration, and many State and local entities both public and private. After compiling and analyzing the data, NRCS is able to provide snowpack estimates and water yield on a monthly basis throughout the snow melting period. The knowledge gained through this effort supports critical decisions on billions of dollars of agricultural production, municipal water supply, hydroelectric and industrial water supply, flood control, and water flow requirements for fish and wildlife. This modest program contributes substantially to the economic and environmental well-being of a very large part of the country.

Soil Surveys provide the public with local information on the uses and capabilities of their soil resources. The fiscal year 1996 appropriations were \$76,163,000; the fiscal year 1997 appropriations are \$76,409,000; and the fiscal year 1998 budget request is \$82,248,000. Soil surveys are based on scientific analysis and classification of soils and are used to determine land capabilities and conservation treatment needs. The published soil survey for a county or designated area includes maps and interpretations with explanatory information that is the foundation of resource policy, planning and decision-making for Federal, State, county, and local community programs. Homeowners and landowners also use soil survey information when making decisions. Soil surveys are conducted cooperatively with other Federal agencies,

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land grant universities, State agencies, and local units of government, many of whom contribute funds and staff.

Soils information has been gathered over many years and is primarily contained in published soil survey manuscripts and maps. There is a need for digital soils data for use in geographic information systems (GIS). NRCS has the leadership role for coordinating the development, maintenance, and distribution of a modernized digital soils data base. Geographically referenced digitized soil survey data, along with orthophotography will provide the accurate reference base needed for computer-assisted conservation, natural resource planning, and for geographic referenced data sharing. In addition, digitizing the soil surveys provides efficiency when updating and maintaining the soil survey data. This budget contains \$5 million to support the updating of older soils information to current standards for digitization of soil surveys and the formation of a national database.

Plant Material Centers assemble and test plant propagation and the usefulness of plant species for biomass production, carbon sequestration, erosion reduction, wetland restoration, water quality improvement, stream bank and riparian area protection, coastal dune stabilization, and to meet other special conservation treatment needs. The fiscal year 1996 appropriations were \$8,875,000; the fiscal year 1997 appropriations are \$8,825,000; and the fiscal year 1998 budget request is \$8,891,000. Plant materials represent inexpensive, long-term conservation solutions to many environmental and natural resource problems and their maintenance costs are usually low. Many landowners and managers willingly use plant materials, if available, to meet their conservation needs.

The work at the 26 centers is carried out cooperatively with State and other Federal agencies, commercial businesses, and seed and nursery associations. Plant Materials Centers play an important research and development roles since most commercial nurseries will not develop new plant materials due to limited markets, but will grow and market the stock once a dependable plant has been developed. After species are proven, they are released to the private sector for commercial production.

Watershed and Flood Prevention Operations is the first and only national program that helps local organizations plan and install watershed-based projects on private lands. It provides site-specific technical expertise and locally based watershed planning and financial assistance for plan implementation. The Watershed Program provides a process to solve local natural resource problems and avoid excessive regulation. The fiscal year 1996 appropriations for Public Law 534 and Public Law 566 were \$180,514,000; the fiscal year 1997 appropriations are \$164,036,000; and the fiscal year 1998 budget request is \$40,000,000 plus \$60,000,000 in Conservation Operation for technical assistance. Therefore, the total funding this budget requests is \$100,000,000. The authorized purposes of watershed projects include watershed protection, flood prevention, water quality improvements, soil erosion reduction, rural, municipal and industrial water supply, irrigation water management, sedimentation control, fish and wildlife habitat enhancement, wetland creation and restoration, and public recreation. The program empowers local people as decision-makers, builds partnerships and requires local and State funding contributions and ownership.

The program has been subject to what we view as legitimate criticisms in recent years. However, we do not agree with those who would attempt to end the program. While I agree fundamentally with those who have criticized the historical use of large dams, reservoirs, and channelization to achieve flood management as destructive to many natural processes and functions in treated watersheds, I do not believe the program as currently administered should be scrapped. Judicious use of physical works to protect and manage watersheds can be constructive—both to natural systems and for protecting farm land from serious harm. For instance, the 1994 Galloway report on floodplain management shows that during the 1993 Midwest Flood, the Small Watershed Program was credited with avoiding \$400 million of damages to population centers, agriculture, and industry. USDA farm program disaster payments were significantly less in watersheds that had been treated with conservation measures through this program. This was also the case with Tropical Storm Alberto in parts of Florida, Alabama, and Georgia. Any project approved by the program for flood prevention will yield very high benefit/cost results.

The agency administers this program by authorizing local sponsoring organizations to begin the development of a plan. In fiscal year 1994 through fiscal year 1996, of the planning starts authorized, most were requested primarily to improve water quality from agricultural sources and to benefit fish and wildlife habitat. The remainder identified water quality as secondary purposes. Proposed project actions include agricultural waste management, nutrient and pesticide management, and other land treatment measures. An example is in Alaska where the first watershed

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project authorized under this program is improving water quality to protect critical salmon spawning habitat. This project is important because it protects salmon as a subsistence food source for Alaskan Natives and for the fishing industry on the coast.

Early in fiscal year 1995, the agency completed a Phase I review of authorized projects. With the agreement of everyone involved, including project sponsors, more than 500 dams and 1,800 miles of stream channel modifications were deleted and many other projects had previously planned measures replaced with more up to date and environmentally sound measures for watershed restoration. We are currently completing Phase II of this review during which the remaining projects are being given a more rigorous review, using the team approach, at the local level. This second phase review has, to date, deleted an additional 135 dams and 930 miles of stream channel. This brings the total to 635 dams and 2,730 miles of stream channel modification removed from current watershed plans, while maintaining the overall goals of those plans. It is important to note as well, that the process has identified and appropriately closed out 76 projects with additional projects being review for closing with the local sponsors.

The agency has undertaken a comprehensive effort to reevaluate the program and is in the process of refocusing it to approach watersheds in a more comprehensive, ecosystem-based fashion, involving all local people with a stake in the outcome, in the broad range of land use and conservation issues. Priority will be given to watersheds where local people have identified the need for natural resource restoration, water quality improvement, restoration of fish and wildlife habitat, flood damage reduction emphasizing non-structural measures, and where local sponsor support is strong. Watersheds located in agricultural and rural community settings with low-income and socially disadvantaged farmers, as well as those serving Native Americans also will receive priority. NRCS will ensure that assistance to local leaders through the Small Watershed Program is supported by appropriate Federal partnerships, is compatible with national natural resource issues and complements State and local priorities. The 1998 budget proposal would provide no additional funds for flood prevention work under the authority of Public Law 534, but would continue work on the remaining high priority projects that would qualify for assistance under the authority of the Small Watershed Program (Public Law 566). Additionally, technical assistance for these program activities would be combined (along with Watershed Surveys and Planning) into a single new line item for water resources assistance requested under the Conservation Operation appropriation.

The *Emergency Watershed Protection (EWP)* program provides assistance to reduce hazards to life and property in watersheds damaged by severe natural events. An emergency is considered to exist when floods, fires, droughts, or other natural disasters result in life and property being endangered by flooding, erosion, or sediment discharge. In the latter part of 1995, October through December, \$98,800,000 was used for emergency work, with the last \$35,500,000 originating in previously appropriated supplemental funds. EWP was utilized during the Midwest Floods in 1993, western wildfires, and Tropical Storm Alberto in 1994, and floods in California and the Southeast in 1995. In fiscal year 1996, an \$80,514,000 supplemental appropriation was appropriated to repair damages to waterways and watersheds resulting from flooding in the Pacific Northwest, the Northeast blizzards and floods and other natural disasters. An additional \$63,000,000 was provided for fiscal year 1997 to repair damages from Hurricanes Hortense and Fran.

During the past eight years, the program has been needed and used in an average of 26 states per year. Technical and financial assistance under the EWP program is available for small-scale, localized disasters not necessarily declared as national in scope. Among the emergency activities, generally performed with temporarily employed local labor, are disaster cleanup and subsequent rebuilding; restoring stream corridors, wetland and riparian areas; establishing quick vegetative cover on denuded land, steep land, and eroding banks; opening dangerously restricted channels; repairing diversions and levees, and assisting the Federal Emergency Management Agency when it plans and relocates communities away from floodplains.

Resource Conservation and Development (RC&D) is a program initiated and directed at the local level by volunteers. The fiscal year 1996 appropriations were \$29,000,000; the fiscal year 1997 appropriations are \$29,377,000; and the fiscal year 1998 budget request is \$47,700,000. The increase over the fiscal year 1997 appropriations will fund pay costs and local, non-Federal watershed and rangeland coordinators to assist in watershed planning and rangeland conservation.

Each RC&D area encompasses multiple communities, various units of government, municipalities, and grassroots organizations. The RC&D's represent an unusual approach for helping citizens address multi-jurisdictional natural resource and community development issues. NRCS provides coordination to the program which

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serves as a catalyst for these civic oriented groups to share knowledge and resources, and it leverages public and private funds to solve common problems—including economic development—in a given area. Assistance is obtained from the private sector, corporations, foundations, and all levels of government. Historically, every dollar of NRCS technical and financial assistance from this program and applied directly to local projects, has been matched by about \$13 from other sources. In fiscal year 1996, RC&D areas completed 2,342 projects and Council members and other volunteers donated 716,184 hours of time to these completed projects. There are currently 290 authorized RC&D areas involving 2,143 counties across the country. In addition, an increase of \$18 million is requested to fund local, non-Federal watershed coordinators to assist in rangeland and watershed planning for a wide range of environmental purposes such as the salmon recovery efforts on the Pacific Northwest.

Forestry Incentives Program. This program is authorized under the Cooperative Forestry Assistance Act of 1978, as amended by section 1214 of the Food, Agriculture, Conservation and Trade Act (FACT) of 1990. The Forestry Incentives Program was re-authorized under the 1996 Act, which extended the program through the year 2002. Authorizing legislation for FIP expired on December 31, 1995.

The FIP primary objective is to increase the Nation's supply of timber products from private non-industrial forest lands. The program encourages landowners to plant trees on suitable open lands or cut-over areas, and to perform timber stand improvements for the production of timber and other related forest resources. The program is carried out through annual and long-term cost sharing agreements with private landowners who improve a stand of forest trees or plant trees.

The fiscal year 1998 budget will provide cost-share funding at the fiscal year 1997 appropriated level of \$6.325 million. Program technical assistance will be provided by the Forest Service (FS). Forestry studies have indicated that over 30 percent of all tree planting on non-industrial, private lands is accomplished through FIP.

Outreach to Socially Disadvantaged Farmers and Ranchers. The budget proposes to continue this program at \$5,000,000. There was a direct appropriation of \$1 million and a transfer of \$4.5 million from the Fund for Rural America to this program in fiscal year 1997. The overall goal of the program is to increase service to small or limited resource and minority producers in order to improve the farm income of these producers. Objectives are to make grants and enter into agreements with community-based organizations and educational institutions to provide outreach and technical assistance. The Outreach to Socially Disadvantaged Farmers and Ranchers program was transferred from the Farm Service Agency to NRCS in October 1996.

COMMODITY CREDIT CORPORATIONS PROGRAMS

NRCS also administers, on behalf of the Commodity Credit Corporation (CCC), several cost-share programs, key among these being the programs set forth in the Federal Agriculture Reform and Improvement Act of 1996 (1996 Act) and also provides technical assistance to individuals and groups participating in the Conservation Reserve Program, which is administered by the Farm Service Agency. The new conservation programs provided by the 1996 Act, which NRCS administers on behalf of CCC, includes the Environmental Quality Incentives Program (EQIP), Wildlife Habitat Incentives Program (WHIP), Farmland Protection Program (FPP), and Conservation Farm Option (CFO). The 1996 Act also amended the Food Security Act of 1985, to the continued implementation of the Wetlands Reserve Program (WRP) which NRCS administers on behalf of CCC.

The *Environmental Quality Incentives Program (EQIP)* provides in a single, voluntary program, flexible technical, financial, and educational assistance to farmers and ranchers who face serious threats to soil, water, and related natural resources on agricultural land and other land, including grazing lands, wetlands, forestland, and wildlife habitat. Assistance will be provided in a manner that maximizes environmental benefits per dollar expended, to help producers comply with Title XII of the Food Security Act of 1985, as amended, and Federal and State environmental laws.

Funds of the CCC will be used to fund the assistance provided under EQIP. The program was funded at \$130 million in fiscal year 1996, of which program authorities for the ACP were used to obligate \$99 million and the program authorities of the GPCP and CRBSCP were used to obligate \$31 million. For fiscal year 1997, \$200 million has been apportioned to implement the EQIP. Of that amount 10 percent was apportioned by the Office of Management and Budget to pay the cost of assisting producers in developing conservation plans, engineering conservation systems, and following-up to successfully apply the systems called for in the EQIP con-

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tract. Fifty percent of the funding available for the program will be targeted at practices relating to livestock production.

The program will primarily be available in priority conservation areas throughout the Nation. The priority areas will be watersheds, regions, or areas of special environmental sensitivity or having significant soil, water, or related natural resource concerns. For fiscal year 1997, 65 percent of the EQIP financial assistance funding will be provided within priority areas. The process for selecting these priority areas begins with the local conservation districts convening local work groups, which are a partnership of the conservation district, NRCS, Farm Service Agency, Farm Service Agency county committees, Cooperative Extension Service, and other state, local, and tribal entities with an interest in natural resources conservation. They develop proposals for priority areas, develop ranking criteria to be used to prioritize producer's applications for EQIP, make program policy recommendations, and other related activities. The priority areas recommended to NRCS by the local work group are submitted to the NRCS State Conservationist, who with the advice of the State Technical Committee and concurrence of Farm Services Agency, sets priorities for the program, including approval of priority areas.

State Conservationists, with the advice of the State Technical Committee and concurrence of Farm Services Agency, may also determine that program assistance is needed by producers located outside of funded priority areas that are subject to environmental requirements, or who have other natural resource priority concerns. For fiscal year 1997, 35 percent of EQIP financial assistance funding will be provided for these significant statewide concerns.

Wetlands Reserve Program (WRP) is a voluntary incentive program to assist owners of eligible lands to restore and protect wetlands and necessary adjacent upland areas. The 1996 Act re-authorized the WRP and provided for funding through the CCC beginning in fiscal year 1997, extended the duration of the program to 2002, added cost-share agreements, and restructured the contract payment terms and length.

WRP preserves, protects, and restores valuable wetlands mainly on marginal agricultural lands where historic wetlands functions and values have been either totally depleted or substantially diminished. Wetland restoration of such marginal lands provides landowners with a financial alternative to continued attempts to produce agricultural products on such high risk lands. Program delivery is designed to maximize benefits to wildlife, to provide for water quality and flood storage benefits, and to provide for general aesthetic and open space needs. Many of the WRP project sites are within areas that are frequently subjected to flooding and the flood storage being provided will lessen the severity of future flood events. The WRP is making a substantial contribution to the restoration of the nation's migratory bird habitats, especially for waterfowl.

The WRP is a mandatory program from a budget perspective but is offered to program participants on a strictly voluntary basis. Under the WRP, the Secretary of Agriculture acquires permanent easements and 30-year easements, enters into restoration cost-share agreements/contracts, provides for overhead costs associated with the cost of purchasing an easement or establishing an agreement, develops wetland restoration plans, cost-shares the restoration, and monitors the maintenance of the easements and agreements. Close cooperation with other Federal and State agencies and private conservation entities is an integral aspect of program delivery. The State Conservationist, in cooperation with the State Technical Committee, is responsible for WRP implementation and operations.

Fiscal year 1996 was the final appropriation under the old program and provided \$77,000,000 to enroll approximately 93,000 acres. The fiscal year 1997 program will provide \$106,000,000 in CCC financial assistance funds to enroll approximately 130,000 acres. In fiscal year 1998, we propose to enroll an additional 212,000 acres. Technical assistance funding for fiscal year 1997, and fiscal year 1998 will be funded from fiscal year 1996 unobligated appropriated funds under the old WRP account due to the limitation on CCC reimbursements.

From inception of the program in 1992, through 1996, interest in the program has been exceptional, providing approximately 313,174 acres enrolled in the program through the end of fiscal year 1996, and coupled with the fiscal year 1997 and fiscal year 1998 program sign-ups, approximately 655,174 are expected to be enrolled by the end of fiscal year 1998. Historically there have been more than five fold as many acres offered than the program could enroll. The fiscal year 1997 sign-up is the fourth that has occurred under WRP since fiscal year 1992. Unlike previous sign-ups, the fiscal year 1997 effort provides landowners with the continuous opportunity to seek enrollment in the program. States periodically rank all unfunded offers and seek allocation of funding for the highest ranked offers. By following this process the maximum opportunity for landowner participation is provided and the WRP is

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assured of having the best possible list of ranked offers available for funding during the year.

In response to the 1996 Act and fiscal year 1997 Agriculture Appropriations Act, the fiscal year 1997 sign-up is separated into three components: permanent easements, 30-year easements, and cost-share agreements. Enrollment is targeted to achieve a balance, to the extent practicable, of each component. The level of enrollment established for 1997 is 130,000 acres with a requirement that the initial 43,333 acres of easements be limited to 30-year duration. Thus far approximately 46,000 acres of 30-year easements have been enrolled. This enrollment was completed before the enrollment of permanent easements was initiated. The 46,000 acres represents approximately 50 percent of the 30-year easement offers that have been received. Approximately 41,000 acres of permanent easements have been enrolled. This represents approximately 25 percent of the permanent easement offers. Approximately 9,000 acres of restoration cost-share agreements have been enrolled. This represents approximately 90 percent of cost-share agreement offers.

One aspect of the 1997 WRP is the authority provided by the 1997 Appropriations Act to incorporate non-Federal contributions into WRP projects and to augment the 130,000 acre enrollment cap for fiscal year 1997 by an acreage amount equal to the value of such contributions. Thus far approximately \$9,000,000 of such non-Federal participation has been identified and should eventually enable us to enroll an additional 11,000 acres. In most instances arrangements are made for the contributors to directly handle the funding aspects of those projects for which they wish to participate so that the Department does not become involved in handling of contributed funds. The primary sources of these contributions are private foundations, non-governmental conservation organizations, State agencies, and landowners.

The *Wildlife Habitat Incentives Program (WHIP)* provides for implementing wildlife habitat practices to develop upland wildlife habitat, wetland wildlife habitat, threatened and endangered species habitat and aquatic habitat. WHIP provides a significant opportunity to restore native habitat, help landowners understand how to best meet their own needs while supporting wildlife habitat development, and to develop new partnerships with State wildlife agencies, nongovernmental agencies and others.

During fiscal year 1997, WHIP implementation plans and ranking criteria have been developed, with advice from the State Technical Committee. We expect to allocate \$20 million of the \$50 million in CCC funds that were sanctioned for use by Congress through 2002, to reimburse participants for installing these practices during fiscal year 1997. We anticipate accessing \$30 million in funds to continue the implementation of WHIP plans during fiscal year 1998.

The *Farmland Protection Program (FPP)* protects prime or unique farmland, lands of State or local importance, and other productive soils from conversion to nonagricultural uses. This program is preserving our valuable farmland for future generations.

During fiscal year 1996, the \$14.5 million in CCC funds were provided to 17 states, who also provided their own funds, to purchase development rights from farmers and ranchers. That allocation led to the protection of at least 50,000 acres of valuable farmland, on 203 farms in 17 states. Qualifying farmland had to: be part of a pending offer from a state, tribe or local farmland protection program; be privately owned; have a conservation plan; be large enough to sustain agricultural production; be accessible to markets for what the land produces and have adequate infrastructure and agricultural support services; and have surrounding parcels of land that can support long-term agricultural production.

For fiscal year 1997, \$2 million was approved by Congress for use from CCC funds to purchase development rights from farmers and ranchers. \$18 million will be accessed in fiscal year 1998 to continue the critical process of protecting valuable farmland for the benefit of future generations.

The *Conservation Farm Option (CFO) pilot program* provides producers of wheat, feed grains, cotton, and rice who are enrolled in AMTA one consolidated USDA conservation program payment, in lieu of the many conservation programs that are available. Producers must implement a conservation plan that addresses soil, water, and related resources, water quality, wetlands, and wildlife habitat. The statute provides broad discretion in designing CFO pilots, and provides the opportunity to tap local agricultural initiatives and innovations for improving environmental quality.

We envision CFO as an opportunity to test the feasibility of innovative program delivery processes and innovative solutions to environmental concerns. We look to the locally-led effort to provide the ideas for innovative pilots. The innovations tested through the CFO may well be the basis for changes in statutory authorities for conservation programs into the 21st century. In fiscal year 1997, pilots will be determined through a Request For Proposal in the Federal Register. The fiscal year 1997

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funding is \$2.0 million. For fiscal year 1998, we are requesting authority to use \$15 million in CCC program funds.

CONCLUSION

In his opening message in "America's Private Land, A Geography of Hope," Secretary Glickman wrote: "In my view, our next great environmental goal is conserving our private land. To achieve this goal, we must accept stewardship on private land as a shared responsibility between public and private interests. The public funds we spend for private land conservation is one of our government's wisest investments, achieving multiple conservation benefits from modest expenditures on research, technical and financial assistance, and targeted land retirement."

As a Nation, we should continue to make wise investments in research, which underpins every form of assistance we provide to the owners and managers of private land. The 1996 farm bill also provided for significant investment in financial assistance through such new programs as the Environmental Quality Incentives Program, Wildlife Habitat Incentives Program, Farmland Protection Program, and Flood-risk Reduction Program. Targeted land retirement was also provided by the reauthorization of the Conservation Reserve Program and the Wetlands Reserve Program. Remaining to be addressed for fiscal year 1998, however, is funding for technical assistance, a primary objective of the budget proposal I've outlined.

The innovative programs in the 1996 farm bill and the financial assistance levels established for these programs offer the opportunity between now and the year 2002, when the farm bill expires, to not only maintain many of the important conservation gains achieved by our Nation's farmers and ranchers over the past 12 years but to add significantly to those gains over the life of the new farm bill. We can continue to reduce soil erosion over and above the substantial gains made under the sodbuster and conservation compliance policies and the Conservation Reserve Program. We can begin to help farmers and ranchers address water conservation and nonpoint-source water quality management problems on a scale heretofore not possible. Wildlife habitat enhancement, for the first time, has become an explicit goal of several national agricultural conservation programs. Likewise, air quality is recognized as a pressing conservation problem requiring attention in certain areas of the country.

But these policy and financial commitments become moot unless the Department of Agriculture and NRCS, its lead conservation agency, have sufficient resources to deliver the technical assistance that farmers and ranchers time and again say they need to take advantage of the conservation opportunities now confronting them. Our partners in state and local governments and the private sector, responding to widespread public support for environmental protection efforts, have increased their financial commitments to conservation on private land in recent years. At the same time, they look to the federal government for a continuing commitment to technical assistance for private land and private landowners, not the diminishing commitment in real dollars that has been the trend over the past two decades. It is this technical assistance that, when coupled with the contributions of our many public and private-sector partners, will allow us to realize the full promise of the 1996 farm bill.

We are all in this together. The task is enormous and complex. But we now have the opportunity in fiscal year 1998 to begin to create the conservation legacy that Secretary Glickman suggested in A Geography of Hope will likely determine our Nation's economic and environmental well-being for years to come.

That concludes my statement. I am looking forward to working with you in the months ahead to review the proposal and work together to maximize service to our customers and help them be good stewards of the land. I will take any questions that members of the committee might have.

BIOGRAPHICAL SKETCHES

LAWRENCE E. CLARK

Lawrence E. Clark is the Deputy Chief for the Natural Resources Conservation Programs for the Natural Resources Conservation Service (NRCS). He has been in this position since October of 1996. Larry began his career with the Soil Conservation Service in 1967 as a student trainee in Morgantown, West Virginia, and has held numerous positions with the agency in Indianapolis, Indiana; Washington, D.C.; Portland, Oregon; Phoenix, Arizona; and Raleigh, North Carolina. Originally from Scotland Neck, North Carolina, Larry went to the North Carolina Agricultural and Technical State University and received his B.S. degree in Agricultural Econom-

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ics. He also holds a master's degree in Public Administration from the J.F. Kennedy School of Government at Harvard University and a master's degree in Regional Planning from the University of North Carolina. Larry is married and the father of two children.

CAROLE JETT

Carole Jett is the Acting Deputy Chief for Soil Survey and Resource Assessment for the Natural Resources Conservation Service (NRCS). She has been in this position since October of 1996. Carole began her career with the Soil Conservation Service in 1975. She has held several positions within NRCS including State Conservationist in Michigan; Assistant State Conservationist, State Soil Scientist, State Soil Correlator, and Soil Scientist in California; and Soil Survey Party Leader in Nevada. A native of Reno, Nevada, she received a B.S. degree in Soil Science from the University of Nevada, as well as doing post-graduate work with minor course work in Hydrology and Range Science.

STATEMENT OF PAUL W. JOHNSON

Senator COCHRAN. Are there others on your panel who have opening statements?

Mr. LYONS. If I could, I'd like to let Chief Paul Johnson say a few words.

Senator COCHRAN. You may proceed, Mr. Johnson.

Mr. JOHNSON. Thank you, Mr. Cochran, Senator Bumpers, for the opportunity to be here with you today.

I would like to make a couple of other introductions. Since the last time I met with you, we have four new Deputy Chiefs. We actually have four Deputy Chiefs within our agency, and they are—although some were here a year ago, they are in a new position today.

Larry Clark is our Deputy Chief for Programs; Tom Weber for Management; Carole Jett for Soil Science and Resource Assessment; and Fee Busby, just on board as of yesterday, our new Deputy Chief for Science and Technology.

Mr. Bumpers, we stole him from Windrock. Thank you very much. I think he's been trained well and is ready to go.

Gary Margheim is also with us today. He is our new Acting Associate Chief.

Most of you know Pearlle Reed has been asked by the Secretary to become the new Assistant Secretary for Administration. So he is in that position now. Gary Margheim is acting in his place and is with us today.

This is my fourth appearance before you. And as you know, huge changes have occurred. I was counting up our State conservationists that are different today than what they were 3 or 4 years ago, and we have over 40 new State conservationists out of 52. We have six new regional conservationists.

I want to add right away that this should not be a cause for alarm. Every single one of these persons has come through our system from the ground up and knows the agency well. They all have many, many years of experience. And it just happens that this is their time to take their place.

It is a very professional agency, as you know. I think we probably have fewer political appointees than just about any agency in Government. And we have about 12,000 employees. As I have told you before, it is a national treasure, and there is a terrific amount of strength within our agency.

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Over the past 4 years, we have reduced our agency by over 1,500 people. And that is not because we did not need them. I would say right up front that I think we could use twice the people that we have today. The work is certainly out there.

We have continued to streamline our agency, and to get a higher percentage of our people in the field. Through an external review process, we have completely—or are beginning to revamp our information technology and our strategic planning efforts.

I think our partnerships with districts, with RC&D's, State agencies, and the private sector have never been stronger. We are very, very pleased with the support that is out there today, and our ability to work together.

As Jim Lyons mentioned, we have a very good set of programs in the new farm bill. And I think that this is very important. We thank you for giving us those tools to work.

Briefly, the Farmland Protection Program is up and running. And I believe the AFT will be issuing a report within the next couple days on farmland protection in this country. And I would urge us all to take a look at it.

I think that we have some serious problems facing us as we sprawl out across the countryside, whether it be prime land—or landscapes in the West are changing very rapidly. And it is probably something that we ought to be paying attention to.

WRP, the new program, is up and running. And we are in the midst of the usual very heavy signup on that. CRP, as you know, we are in the middle of a very, very busy month. And from my understanding of it, the signup is huge.

But there are important things going on out there. We never before have had so many people come together to help out in a program as this one and what is happening today.

We have people from State fish and game agencies. We have foresters. We have volunteers. The Farm Service Agency and NRCS, the conservation districts are all putting very large numbers of people to work on this. I do not think we have ever had a Federal program where we have had so much effort from so many people. And I think that is a real good sign.

Along with that, we have introduced the new buffer initiative. And we are suggesting the possibility of up to 2 million miles of buffers by the year 2000. These are vegetative buffers that include buffers, contour buffer strips, field borders, and the like.

For farmers who are going to bring their land back into production, we are going to be working with them to try to maintain some vegetative buffers on that land. As we are telling them, farm the best and buffer the rest. And we think we have some terrific opportunities there.

EQIP rules, the final rules, are going to OMB within the next few days. The allocations are out, and our people are already thinking and working with farmers on that.

Compliance is still working. Our reports are, through our status reviews, that farmers are still maintaining their systems that they put in place over the last 10 years.

Within the agency, we have new technical institutes that are up and running and producing the tools that we need to do the job.

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The grazing lands conservation initiative [GLCI], is now in almost every single State in the country. And there is a terrific amount of enthusiasm for it from the grassroots levels.

Our State technical committees are functioning. We think that this is an exciting part of the last farm bill, and the opportunity for State and Federal agencies and interest groups to come together to help guide our programs. And the feedback I am getting is that these are working in very good fashion.

Locally led conservation has been mentioned over and over again. It is really cranking up. It is not our locally led conservation. It is locally led conservation by people at the local level. Conservation districts, RC&D's are coming together on it, watershed coalitions and so on.

And briefly, what they are doing is assessing where they are, setting goals for themselves, and then using our programs and our technical assistance as tools to achieve those goals.

We think it is an exciting approach. It is one that we began 60 years ago and are renewing our efforts along those lines today.

Our watershed program continues, although we have, as you know, had concerns over the years that perhaps support for it is not as great as it used to be. And we are working together with a broad range of people to reach consensus on it.

And we are finding that there is a huge amount of interest in our watershed program. And we will continue to work with you on that.

We did get out, as you know, the new publication, "Geography of Hope." The idea there is to try to get the American public to better understand the important contribution that private lands make to the health and well-being of our Nation. We have it out across the country right now, and we are getting very good response from it.

What is happening on the ground? Our status reviews, as I have said, are showing we are at least maintaining the status quo there. We are not slipping.

We just did what we call the mini-NRI, where we went out and took a snapshot of soil erosion, a statistically valid sample on our croplands in this country. We are finding that erosion rates are about the same as they were the previous year.

So even with Freedom to Farm, we do not feel we are slipping backward. On the other hand, we all know that we have got a long way to go before we hit a sustainable level.

We still have problems, though. And I would be remiss to be in front of you today and not mention some of those. We still have cropland eroding at fairly high rates in some parts of the country, whether it be the west Texas, central plains of Colorado, the fields of Iowa. We still have erosion rates that in some cases exceed four times what we consider a sustainable level.

So we should not lull ourselves into thinking that the great progress that has been made in the last 10 years is all that we need to do. We still have a long way to go.

Even with our remarkable progress of the past 10 years, 44 million acres of highly erodible land still erode at more than two times the tolerable level, if we are looking at a sustainable level over the long haul. Over—

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Senator BUMPERS. Mr. Johnson, with the chairman's indulgence, and before I forget it—and I am also going to have to leave for a few minutes—let me ask you a specific question.

How many arable acres of land in this country are under cultivation?

CULTIVATION OF ARABLE ACRES

Mr. JOHNSON. If you look at what we call cropland, it is in the neighborhood of, I think, about 430 million acres. You add another 600-and-some million acres in grazing land, and we are over 1 billion acres, or close to 1 billion acres.

Senator BUMPERS. I would like to stick with cropland for just a moment, 430 million acres?

Mr. JOHNSON. Just about that, yes.

Senator BUMPERS. And how much do we lose a year to urban sprawl, that is, housing developments and shopping centers, highways?

LOSS OF CROPLAND TO URBAN SPRAWL

Mr. JOHNSON. It is slowed somewhat from previous years, although, as I mentioned, there is a concern of an explosion of that sprawl again taking place right now. But I think that the Farmland Trust and, in fact, our numbers show that we are probably losing in the neighborhood of 1 percent. That is probably close.

Senator BUMPERS. So that would be, roughly, a little over 4 million acres.

Mr. JOHNSON. Three million, somewhere in that neighborhood.

Senator BUMPERS. Three million is the figure I had heard.

Mr. JOHNSON. Yes, right.

Senator BUMPERS. But these things are rather alarming when you look at them. I have been watching this for years, but I just wanted to nail that down for the record, and for my own edification. Thank you, Mr. Johnson.

Mr. JOHNSON. I think beyond that, we need to look at some of the sprawl that is taking place in the West as well. So it may not be what we would consider prime farmland, or good cropland, but it certainly is changing the landscape of the West.

There is a great deal of concern about that among ranchers and farmers, and people who are in the West because of those grand landscapes that are now being chopped up. So I think it is something that we should be concerned about.

Senator BUMPERS. It is obvious that when you have an acreage of the country, the arable acreage planted to cropland going down and the population going up, you have got a real train wreck.

Mr. JOHNSON. Yes.

Senator BUMPERS. It is not going to happen in my lifetime, but obviously that cannot go on forever.

Mr. JOHNSON. I talked to a person in Chicago yesterday. In that area, between Chicago and Madison and Milwaukee, some of the best farmland in the country today is going under concrete, very, very rapidly, in fact.

In continuing in the needs and the concerns that we have, we have been working more over the past many years on sheet and real erosion.

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But we also need to focus much more on gully erosion. We are finding in looking at that closely that erosion is considerably more serious than we thought. We think that the new CRP vegetative buffer initiative will certainly help with that.

Most waters in the United States are graded close to OK, although there are serious concerns. We need to understand and recognize the fact that agriculture is a major contributor to our surface water and ground water problems. And we should not close our eyes to that.

Ground water over drafting is still serious. If you look into the West, particularly, but even in the East, we are seeing places where we are drawing far more water than is being replaced. We know that cannot go on forever.

Twenty-one States are reporting saltwater intrusions into freshwater aquifers, something to seriously be concerned about. And over 60 percent of our rangelands have serious ecological problems, still. This includes noxious and exotic weeds and serious erosion problems.

We need to make sure that we understand where we are on these things. Although the budget that we submit to you by some has been called aggressive and even unrealistic, we believe very strongly that it is not.

In fact, if we look to balancing our budgets, and we know we have to do that on the financial end, we need to tell you that we are not doing it on the natural resources end right now on private lands, in spite of the progress that we have made. But it is something that we must be aware of and pay attention to.

Our budgets are small compared to what they have been in the past. If you look at our 1937 contribution to conservation on private lands in this country, it was twice what it is today, in real dollars.

It is .17—seventeen one-hundredths of 1 percent of our total Federal budget is going to the Federal effort to provide conservation on over 70 percent of the land in this country.

People have chuckled at me when I have said that this effort probably needs to be twice the size of what it is today. But I call your attention to that. And I realize what we are up against, but I think it is very, very important that we pay attention to that.

I would like to close with a statement that we made at the end of our “Geography of Hope.”

As we move into the next millennium, our Nation must strive for a state of harmony. We can no longer be satisfied with slowing erosion, water pollution, and other forms of land degradation.

Harmony will demand that we set our sights higher, to improve the land upon which our destiny rests by restoring those places that are damaged, by enhancing those places whose condition is merely adequate, and by protecting those areas that remain pristine.

Achieving the ideal may well prove impossible, but helping farmers, ranchers, and others try is the fundamental mission of the Natural Resources Conservation Service. Only then will private land become an integral part of our Nation’s Geography of Hope.

Thank you, Mr. Chairman. And at this time, we would take questions.

CCC FUNDING

Senator COCHRAN. Thank you, Mr. Johnson.

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Thank you, Mr. Secretary, for your statements.

In looking at the budget request, one question strikes me as we start. Some of our programs this year, because of the passage of the farm bill last year are mandated by law to perform with no discretion in the amount of money to be appropriated. So the jurisdiction of this committee has changed somewhat by that law which Congress passed and the President signed.

Among the programs that are now mandated at specific levels of funding in the Authorization Act are the Wetlands Reserve Program, the Conservation Reserve Program, the EQIP Program, the Wildlife Habitat Incentives Program, and others, the Conservation Farm Options and the Farmland Protection Program.

My question is: In your statement—I guess this is the Secretary's statement—on page 3, there is a list described in a table showing the major items in this year's budget request, and it contrasts them with the comparable figures from the 2 prior fiscal years.

Included are some of these mandatory programs, the Wetlands Reserve Program, for example. It is pointed out that in fiscal year 1996, there was \$77 million in the budget for that program, and in 1997 and 1998, there are no funds in the budget.

Why would you not put money in the budget, recognizing that those were funds that were going to be spent under the operation of the farm bill?

Mr. LYONS. Mr. Chairman, we simply broke those out because, of course, those programs, by statute, are funded out of the CCC account, so they are broken out separately, identified as expenditures out of CCC.

Senator COCHRAN. The Conservation Reserve Program is not listed at all. Are there funds requested for any of those programs in your budget request?

Mr. JOHNSON. The Conservation Reserve Program is probably under the Farm Services Agency's budget. We will be needing funds out of the Conservation Reserve Program to service it, the technical assistance part of it. Otherwise, it is CCC right now.

And I believe that our technical assistance is probably going to be coming from carryover from the previous couple of years. So CRP is now CCC, as well.

FUNDING EQIP

Senator COCHRAN. There is a specific request, somewhere in here I saw, for the EQIP Program, or maybe it is an estimate that you included in the budget submission, showing the number of contracts and how much they would cost.

It is estimated, for example, that the Service will award 5,143 contracts, costing approximately \$170 million over fiscal years 1997 and 1998.

What will be the impact of this estimate on the appropriated accounts that we will have to approve?

Mr. JOHNSON. I believe you might be referring to WRP, but I am not—

Senator COCHRAN. Well, let me read the whole question here that my staff has given me some background on.

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They say the Department of Agriculture announced on March 10, 1997, preliminary State funding allocations for the Environmental Quality Incentives Program.

Mr. JOHNSON. Yes.

Senator COCHRAN. The Department allocated \$170 million for State priority areas. The remaining \$30 million would be allocated to the States when their final needs for technical, financial, and educational assistance are determined.

How did the NRCS decide on the number of contracts and the cost?

Mr. JOHNSON. The total number, the \$30 million that is there will be technical assistance to service those contracts. The actual contract numbers—maybe I could refer to Larry Clark on that, who is Deputy Chief of our programs, and let him give you specifics on it.

Mr. CLARK. Mr. Chairman, the \$170 million that was allocated to the States using a formula that we developed in partnership with a host of other agencies.

Not included in that amount is \$20 million of technical assistance. We also set aside \$5 million in the allocations to deal with native Americans' concerns and social disadvantaged producers.

We also are holding on to a small reserve in that amount to deal with unforeseen circumstances as States begin to implement the program.

ALLOCATION OF FUNDS

Senator COCHRAN. One complaint that I had in a meeting with conservation district representatives and others who came to see me this week was that because of some of these new programs—EQIP was one of them that was mentioned—there is less money being allocated for some of the traditional functions of the Natural Resources Conservation Service. Watershed was one area mentioned. Surveying and planning was another.

The actual money that is being given to the States to use as they choose is getting less and less because of these other programs that have come along, and are requiring the funds.

Is that an accurate assessment, or was my impression inaccurate?

Mr. CLARK. If I can try to answer that, the allocations that we make to the States, first, are based on appropriated funds, the amount that the Congress appropriates to the agencies.

The second part of the allocation deals with these mandatory programs. And those allocations are based on our estimations of how much we will earn in carrying out those programs. So it is somewhat variable.

In the CRP example, we assume that we will earn so much of that reimbursable amount based on an estimated level of signup. And the same thing goes for WRP and so on.

Mr. JOHNSON. I might add that there are some changes in this budget that perhaps as people have read it do not really recognize the Watershed Program. For example, if you put the financial assistance and technical assistance and planning together, in the past that was under the 08 and 06 budget lines, I believe.

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This budget is putting the technical assistance and planning up into our conservation operations, so it looks like there is only \$40 million left for financial—or for the Small Watershed Program.

There is still \$100 million. It is just that it has been divided out. And it could be that in reading that they felt that there is no longer \$100 million going into the Small Watershed Program. That could be one of the issues.

Another, of course, is there used to be ACP, which went out pretty much like a blanket across the country. Every district, just about, received some ACP funds.

The new EQIP Program will be divided this year into a 65–35 mix, 35 for priority concerns, which will be out across the States in most—well, I think most districts will be able to have access to some of that.

And so, I think the districts are saying, “We had this money before; now we do not.”

I think they will see that it will be there, but it is probably coming under a different title.

Mr. LYONS. We should not lose sight of the fact, though, Mr. Chairman, that while we have certain mandatory accounts, authorized levels of expenditures that were associated with the farm bill, that the remainder that is in our discretionary accounts is declining over time. And that is reality.

So certainly to some degree, there is less money to go around. That has been felt by conservation districts and other partners in terms of the work we have been able to do on the ground, and the support for things like technical assistance.

You know, just looking at the 1996 and 1997 reductions, we went from \$725 million down to \$706 million for conservation operations. We have asked for a little more money because we have much more demand.

You know, there is a lot of excitement across the landscape about the conservation tools that are out there. The key is we need the people out there to deliver the services.

So we have asked for a small increase, but, you know, we are constrained, as are you, in terms of what we can ask for, and what you can possibly provide us. So we should not lose sight of the fact that discretionary accounts decline, and they are declining.

Mr. JOHNSON. And I do not want to leave you with the impression that ACP is still there. The law changed that, of course. And it is now multiyear contracts.

But it is priority concerns, which may be water quality in a State, and then there are priority areas which focus on much more than that.

On the other hand, with the new CRP and the continuous signup, the opportunity for districts and for local county committees to be working with farmers on many, many more farms than we did before, I think is much greater.

So I think if we utilize that continuous signup on CRP, we are going to see that an awful lot of districts will still have a fairly strong program. And those vegetative buffers are very important throughout the landscape.

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CONSERVATION RESERVE PROGRAM

Senator COCHRAN. You mention that the Conservation Reserve Program is actually administered by another agency, and that you provide technical assistance.

Was it your assistance that led to a new emphasis in the kind of land that will be eligible for enrollment in this next year, as contrasted with previous years?

Mr. JOHNSON. That really came out of 10 years of experience, and a CRP that came about in 1985 under different conditions than today. We have learned a great deal about it.

We went out across the country and asked farmers and ranchers and conservationists. They suggested that it ought to be targeted more toward environmental benefits and not a land retirement program, as such.

And so, together with the Farm Services Agency, but primarily with the advice of farmers and ranchers across the country, and, of course, the Secretary as well being very supportive of this, the new CRP is probably focusing on more environmental benefits than we did the first time around.

Senator COCHRAN. I am told that one of the major results that has been noticeable, and very clear, is the wildlife habitat enhancement that has flowed from the Conservation Reserve Program.

Particularly in our State of Mississippi, we have noticed a tremendous amount of acreage now that is attractive for wintering habitat for water fowl that migrate through the lower Mississippi River Valley. Many other species of wildlife seem to have been nurtured, although now they are being drowned, I am afraid, or run up to higher ground, and will be under a lot of pressure because of flooding in our area right now.

Is this considered to be an important aspect of the Conservation Reserve Program, and will you continue to try to identify areas as eligible that will have a wildlife habitat enhancement factor?

CRP—MISSISSIPPI FLYWAY

Mr. LYONS. Mr. Chairman, I would mention that—and I am proud to say in partnership with you and some others, who have worked on these issues over the years, that wildlife is taking a prominent role in guiding programs like CRP.

In the environmental benefits index that we used to determine eligible acres, soil erosion, water quality, and wildlife habitat have, in essence, equal standing.

And there has been tremendous benefit associated with the CRP program. Yesterday, for example, Secretary Glickman was the keynote speaker at what is called the North American Wildlife and Natural Resources Conference, which is probably the Nation's biggest meeting of professional land managers, wildlife biologists, agencies such as Forest Service, Fish and Wildlife Service, et cetera.

I cannot remember having a Secretary of Agriculture being the keynote speaker at that conference. Highlighting the success stories associated with CRP, we can point to species—two species of birds that faced extinction that were—that extinction was curbed, or at least there is hope for recovery as a result of CRP.

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Twenty or so species of birds in the Mississippi flyway, in particular, their declines have been arrested as a result of CRP.

We now have a tremendous opportunity to use those programs to benefit wildlife, to protect water quality and, as we have traditionally done, to focus on soil erosion. And we are seeing the benefits. CRP probably gets the most focus, but through WRP, the WHIP Program, I think, affords us exciting opportunities to do some things to protect wildlife resources.

I can remember meeting in this room as a member of the staff of the House Agriculture Committee, along with my deputy, who was then staff to the Senate Agriculture Committee, talking about wildlife in 1990.

And unfortunately, wildlife was equated with endangered species by a lot of people, and seen as a threat, as opposed to what it has now come to be realized as a tremendous value, and a tremendous opportunity for landowners.

I am pleased to have been a part of that, and I am certainly grateful to you for the leadership you have demonstrated, going back to 1985 farm bill, and making that an important priority.

WHIP PROGRAM

Senator COCHRAN. Well, I thank you for that observation, Mr. Secretary. I know the WHIP Program was authorized in the recently passed farm bill. It calls for the Department to issue regulations.

I submitted some comments, hoping that they would be considered. I wonder when we can expect the regulations to actually be implemented.

Senator BUMPERS. This is good. We are going to pin him down on this one. [Laughter.]

Senator COCHRAN. It has not been published yet, I do not think. So we probably ought to start with that question, first. When will they be published?

Mr. JOHNSON. They are in the Department for review right now. And I think we are going to see them out within a month or two. So they are coming along. You need to know that.

Senator COCHRAN. But the sooner they get published, you know, the sooner we will get the program underway. We have money in this budget, I understand, of \$22.5 million for implementing the WHIP Program.

Will you have the ability to manage this program so that it will get started, and some of those moneys will actually be used—

Mr. JOHNSON. You bet.

Senator COCHRAN. In this fiscal year?

Mr. JOHNSON. Yes; we will. We can promise you that.

SAFE HARBOR PROVISION

Senator COCHRAN. There is a safe harbor provision in the program providing cost share funds for landowners to create a habitat that is conducive for endangered species during the life of the landowners' contract.

Are there safeguards being proposed or considered by the Department which will protect the landowner's long-term interest once his contract expires?

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Mr. LYONS. Mr. Chairman, we are working on developing an appropriate safe harbor mechanism, and working with the Fish and Wildlife Service to that end.

I am certain that we will be able to address those concerns and ensure that landowners realize the benefit and are not penalized for improving wildlife habitat, which certainly was an important part of the discussion when WHIP was considered in the farm bill.

YAZOO BASIN PROJECT

Senator COCHRAN. There is a demonstration erosion control issue in our State. The Yazoo Basin demonstration erosion control project was established in 1984. You may want to look at this for the record, so maybe I will just submit this for you to look at.

We had an original funding level of \$4.1 million. The Corps of Engineers is involved, and the Agriculture Research Service, with the NRCS, and are supposed to work jointly on a program to demonstrate the use of watershed system basis methods of reducing flooding, erosion, and sedimentation in six elected watersheds in the Yazoo Basin.

This area has been increased now to include 16 watersheds. There has been direct funding for the program. I am curious to know whether you have any requests for funds, or consider carrying on this program in the future.

This is a question that we have addressed to our State conservationist, and I am curious to know whether you intend to support this effort and allocate funds for this program in the future.

Mr. LYONS. Yes, we do, Mr. Chairman. We intend to continue the program and the positive working relationships in the basin.

Mr. JOHNSON. I think we can give you a more complete written answer on that as well to let you know exactly where we are right now.

Senator COCHRAN. I am specifically interested in knowing whether you have gotten any money from the Corps of Engineers, whether funds have been allocated to the NRCS.

Mr. JOHNSON. We have, and my understanding is that we are in the neighborhood of 95 percent complete on those funds to carry out what they were to do. But we will get you a written response on that to make sure that we get the numbers correct.

Senator COCHRAN. Well, we want to be able to have some influence in the energy and water appropriations bill, too, on this subject. If we need to specify with language what we expect the Corps of Engineers to continue to do, we are prepared to do that as well.

I just want you to know this is a high-priority area, and particularly with the flooding that we are experiencing now in this basin, it is a serious problem.

[The information follows:]

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MISSISSIPPI, YAZOO DEMONSTRATION EROSION CONTROL

[Fiscal years 1985-96]

Fiscal year	Amount requested from national headquarters	Amount of technical and financial assistance received for DEC from national headquarters	Amount NRCS received from DEC from corps	Language reference
1996	\$7,500,000		¹ \$1,785,000	Pg. 67, 1996 Committee Report. ¹
1995	3,000,000		¹ 4,430,000	Pg. 65, 1995 Senate Report 103-290. ²
1994	10,000,000	\$10,000,000	660,000	Report not available.
1993	10,000,000	8,500,000	115,000	1993 Senate Report 102-334. ³
1992	10,000,000	8,000,000	645,000	(⁴)
1991	10,000,000	7,000,000		1990 Senate Report. ⁵
1990	10,000,000	7,000,000	1,619,000	(⁶)
1989	5,000,000	5,000,000	120,000	(⁷)
1988	5,000,000	5,000,000	100,000	(⁸)
1987	5,000,000	5,400,000		
1986	5,000,000	5,000,000		
1985	5,000,000	4,100,000		

¹These funds were received from Corps for a fiscal year 1994 agreement.

²Fiscal year 1996 Committee Recommendation: The Committee expects progress to continue on the Yazoo basin demonstration erosion control project.

³Fiscal year 1995 Committee Recommendation: The Committee expects progress to continue on the Yazoo basin demonstration erosion control project.

⁴Fiscal year 1993 Committee Recommendation: \$10,000,000 needed by SCS.

⁵Fiscal year 1992 Committee Recommendation: Included within the Public Law 534 amount is \$8,500,000 to cover the Soil Conservation Service share of the Yazoo Basin, Mississippi, demonstration erosion control projects.

⁶Fiscal year 1991 Committee Recommendation: The bill includes \$7,000,000 for the Soil Conservation Service to continue work on eligible projects.

⁷Fiscal year 1990 Committee Recommendation: The bill includes \$5,000,000 for the SCS to continue work in eligible projects.

⁸Fiscal year 1989 Committee Recommendation: The Committee concurs with the House provision of \$5,000,000 for the Yazoo demonstration project.

SOCIALLY DISADVANTAGED FARMERS

Senator COCHRAN. You mentioned in your comments the program for socially disadvantaged farmers. I think that was the phrase that was used.

Is it my understanding that this program has been transferred from the Farm Service Agency to the Natural Resources Conservation Service? And if so, why was the program transferred?

Mr. JOHNSON. I believe it was transferred because there was a feeling that we probably were better connected with the 1890's Institution, and with a good delivery system to move forward on it.

I believe it was transferred last October. We are housing that program within our agency right now.

I think that as the civil rights issues move forward, that program and where it will be will certainly be up to the Secretary, and where it is housed right now may not be where it is in the future. I think there is going to be some discussion of that as we move forward.

Senator COCHRAN. I do not know how you spend the money for that program, but I would suggest that you consider some of the historically black colleges and universities, such as Alcorn State University and Mississippi Valley State University, which have had a history of working with farmers in our State. There are probably colleges and universities in other States that are similarly experienced in some of these initiatives.

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To involve them in an active way would be, in my view, very appropriate and a good use of these funds.

Mr. JOHNSON. And we are doing that. The program, as we received it, had been funded at, I believe, \$1 million. And then I think that the fund for rural America put another \$4 million into it in fiscal year 1997. So we are up to \$5 million, and we are asking that that be continued in our 1998 budget.

Senator COCHRAN. I noticed that a number of entities have been funded by the program; 28, I am told. For the record, we would like to have a list of those so we will know the kinds of things that you are spending the money on.

Mr. JOHNSON. We will get that to you.

Senator COCHRAN. Thank you.
[The information follows:]

OUTREACH FOR SOCIALLY DISADVANTAGED FARMERS PROGRAM PARTICIPATING ENTITIES

Alabama: Alabama A&M University, Tuskegee University
Arkansas: Arkansas Land and Farm Development Corporation, University of Arkansas at Pine Bluff
California: Hermandad Mexicana Nacional
Delaware: Delaware State University
Florida: Florida A&M University
Georgia: Federation of Southern Cooperatives, Fort Valley State University
Kentucky: Kentucky State University
Louisiana: Southern University and A&M College
Maryland: University of Maryland Eastern Shore
Minnesota: American Indian Center (Project Grow)
Missouri: Lincoln University
Mississippi: Alcorn State University
North Carolina: North Carolina A&T University
North Dakota: Fort Berthold Community College, Little Hoop Community College
Oklahoma: Langston University, Eastern Oklahoma State University
South Carolina: South Carolina State University
South Dakota: Oglala Lakota College
Tennessee: Tennessee State University
Texas: Prairie View A&M University, Texas A&M University
Vermont: University of Vermont
Virginia: Virginia State University
Wisconsin: Lac Courte Oreilles Ojibwa Community College

CONSOLIDATION OF FSA AND NRCS

Senator COCHRAN. I have a number of questions that I am going to submit. Senator Bumpers may be returning here, and he may have questions to either submit or discuss with you.

One thing I noticed in here was this consolidation of administrative expenses between the Farm Service Agency and the NRCS which confuses me a little bit.

They are two distinct missions, it seems. Matter of fact, I think a concise statement of the NRCS' mission is to provide national leadership in a partnership effort to help people conserve, improve, and sustain the Nation's national resources environment. This is in the budget.

When you talk about FSA in the budget, its mission is to ensure the well-being of American agriculture and the American public through the efficient, equitable administration of funds, commodities, credit, conservation, environmental emergency assistance, domestic and international food assistance, and international export credit programs.

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How can you combine or consolidate your functions at the headquarters level with these two, what appear to be, distinct missions? How do you decide how much goes to each of these mission functions at the headquarters level?

Mr. JOHNSON. I do not have the license to say this, but it confuses me a little bit, too. We think that we do have some opportunities to share. We are trying to do it now at USDA service centers.

I think the important thing here is that we maintain our very well defined missions as agencies. And I do not believe that we are saying here that two agencies should become one, or that we should lose our missions, but that where they can service us and we can service them, we ought to look for ways in which we can do that.

I have been working with Grant Buntrock on this now for 3 years, trying to figure out ways where we can provide services to them; if we can do it better than they, and they to us, without our taking over their policy, for example, or they taking over our policy.

And I think there are possibilities to do that. We need to continue to explore it.

Senator COCHRAN. Well, there is an indication in the budget that there will be an independent entity asked to examine FSA and NRCS for opportunities for further consolidation and centralization of these agencies.

Is this something that is going to be contracted out and studied? Do you have a request for funds for that purpose in the budget?

Mr. JOHNSON. This is to be done in fiscal year 1997, I believe. I think that we are now scoping out the opportunity to do that with an outside contractor. It will probably be absorbed within our operating budget.

Mr. LYONS. This is currently being discussed, Mr. Chairman, in the Secretary's office as to the structure, and how his study would proceed. So we are really not in a position, I think, to offer as many details as you might need.

OFFICE CLOSINGS—STAFF LEVELS

Senator COCHRAN. I know that we are going to see the agency closing field offices and consolidating offices throughout the country.

Are you going to reduce the levels of staffing in the process? What are some of the practical results and consequences for farmers and landowners that we will notice?

Mr. JOHNSON. Well, to a very great extent, that is up to you. We do need a strong conservation operations budget. And we have submitted that to you.

Our view on this is that we do not see the Natural Resources Conservation Service cutting back further than what we are right now, or than what we set out to do by the end of this fiscal year in the consolidation of the service center effort.

Rural Development, for example, is down to 800 offices now, or a little over 800. And we are in most of those offices with them.

The Farm Services Agency is at 2,500 offices, and they are trying to work through their budget and their workload to see how many they should be in. And we will continue to be in those with them.

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But then I think that we will continue to work with our conservation districts and be out there where the work is. There is still as much land as there was before, even though there may be fewer farmers, and the commodity programs may not be there in the future. We do not know for sure yet.

But I think you could view it in terms of maybe a nesting process where we may all be in some offices. Farm Services may in another batch with us, and then we are going to probably be in further offices out there across the country.

Even when we have pulled back to 2,500, we have kept the presence in some areas. I keep telling people that the idea of a service center is a good one, because these are hubs through which—or out of which we work, but that we keep saying that if we get this together right, an office is also a laptop and a pickup truck, and that with the new technology, we ought to be in a number of places across the country, and not necessarily in four walls that look a certain way.

So we will continue to work with the other agencies so that we plug in and try to be seen less in terms of our customers. But we see this as something that does not have to be confined within four walls at a certain number of places.

SUPPLEMENTAL FUNDS

Senator COCHRAN. You mentioned the 1997 fiscal year as the year that you are going to be looking at ways to further consolidate and make the agency's operations more efficient in working with companion agencies.

Do you expect that you will be submitting a request for supplemental funds, particularly in view of the flooding and the other problems that have arisen this year in the Ohio River Valley and the lower Mississippi River Valley?

Mr. LYONS. Yes, Mr. Chairman; in fact, the administration is working up the numbers, so to speak, in terms of the funds we feel are going to be needed to address flooding and other natural disasters that have occurred on the west coast and the Great Plains, the Mississippi Basin area.

I believe right now we are looking at the Ohio and the impacts of flooding on the Ohio so we can estimate some of the damages that have occurred there, so we can complete this package.

PREVIOUS EMERGENCY WATERSHED PROJECTS

Senator COCHRAN. We had some previous emergency watershed projects that were identified in earlier years that were never finished because the money ran out, or it was not sufficient to cover all of the projects that were identified.

I know in our State we have had emergency watershed projects characterized and studied, but never actually completed because of insufficient funds.

Is there any consideration being given to permitting some of the funds that might be approved in a supplemental to be used to meet the needs that have already been previously identified as emergency in nature and in need of Federal assistance?

Mr. JOHNSON. The process that we are going through right now is to try to collect all of those needs, including the needs from last

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year's hurricanes, for example. And we have needs going back to the early nineties.

So we have not forgotten those, and we recognize that there still are needs out there. But we are proposing that to the Department, and then on through the system.

Mr. LYONS. I think, Mr. Chairman, there is a need to assess the backlog of needs, as you have suggested, and also, I think to take a forward look.

I know one of the issues we are discussing within the administration is what constitutes an emergency need. And if, for example, in the case of restoring flood damage, we are simply going to put things back the way they were, or take advantage of the opportunity, perhaps, to make needed improvements, whether it is in setting levies back, or in other watershed improvements that reduce the risk of future flooding; in essence, do it right the first time.

And I would just say that this is an issue I hope we will have a chance to discuss more, because there is a little bit of a debate within the administration right now as to what constitutes an emergency.

In my mind, it would be foolish to simply limit what we do to restoring the damage done if there is a way to be more efficient and reduce, hopefully, the likelihood that we will have to revisit those areas in future years, because we failed to make needed investments today to reduce the risks of damage down the road.

UNFUNDED NEEDS

Senator COCHRAN. It would be instructive for us to know how many unfunded needs have been identified by the State conservationists around the country. Can we have a breakdown of the unfunded needs by State, and how you plan to distribute supplemental funds that might be appropriated to the States for emergency watershed protection activities?

Mr. JOHNSON. We will get that to you in writing.

Senator COCHRAN. Thank you very much.

[The information follows:]

Natural Resources Conservation Service—Watershed and Flood Prevention Operations, Emergency Watershed Protection Program, and Planned Distribution of Supplemental Funds

<i>State/project</i>	<i>Fund needs total</i>
CA: New Year's storm 1/97	\$9,900,000
CA (FS): 16 National Forests	2,600,000
ID: New Year's storms 1/97	6,600,000
ID (FS): 1/97 storm—Boise & Payette National Forests	1,100,000
NV: New Year's storms 1/97	17,900,000
OR: New Year's storms 1/97	7,000,000
OR (FS): 1/97 storm	150,000
WA: New Year's storms 1/97	2,000,000
MT: January blizzards	2,000,000
ND: January blizzards	1,000,000
SD: January blizzards	500,000
States: Potential spring floods ¹	18,000,000
CA, ID, WA, OR, NV: EWP flood plain easements	10,000,000
CA ID WA OR: Riparian area treatment	5,350,000
Total	84,100,000

¹ Flooding potential from 300–400 percent of normal snowpack melt.

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NATURAL RESOURCES CONSERVATION SERVICE—WATERSHED AND FLOOD PREVENTION OPERATIONS AND EMERGENCY WATERSHED PROTECTION PROGRAM

[March 18, 1997]

State/Project	Fund needs TA	FA	Fund needs total
CA: New Year's storms 1/97	\$2,000,000	\$7,900,000	\$9,900,000
CA (FS): 16 National Forests	2,600,000	.....	2,600,000
ID: New Year's storms 1/97	1,100,000	5,500,000	6,600,000
ID (FS): 1/97 storm—Boise and Payette National Forests	1,100,000	.....	1,100,000
NV: New Year's storms 1/97	3,000,000	14,900,000	17,900,000
OR: New Year's storms 1/97	1,000,000	6,000,000	7,000,000
OR (FS): 1/97 storm	150,000	.....	150,000
WA: New Year's storms 1/97	500,000	1,500,000	2,000,000
MT: January blizzards	350,000	1,650,000	2,000,000
ND: January blizzards	250,000	750,000	1,000,000
SD: January blizzards	120,000	380,000	500,000
MD: Hurricane Fran	100,000	375,000	475,000
NC: Hurricane Fran	2,600,000	11,000,000	13,600,000
VA: Hurricane Fran	975,000	4,025,000	5,000,000
WV: Hurricane Fran	60,000	225,000	285,000
MS: 1991-94 storm damage ² .....	.....	20,000,000	20,000,000
IL: July 1996 Chicago rains	200,000	1,000,000	1,200,000
OH: Ross, Gallia, Brown Counties	88,000	330,000	418,000
OK: Grant and Alfalfa Cos	32,000	105,000	137,000
PA: Tioga County	20,000	200,000	220,000
TN: Giles and Humphreys Cos .....	.....	54,000	54,000
AR: March 1997 tornado/floods	30,000	170,000	200,000
AR: March 1997 tornado/floods ¹	1,000,000	5,000,000	6,000,000
IL: March 1997 tornado/floods	400,000	2,000,000	2,400,000
IN: March 1997 tornado/floods	40,000	200,000	240,000
KY: March 1997 tornado/floods	600,000	3,000,000	3,600,000
OH: March 1997 tornado/floods	4,000,000	18,200,000	22,200,000
MS: March 1997 tornado/floods	400,000	2,000,000	2,400,000
TN: March 1997 tornado/floods	400,000	2,000,000	2,400,000
WV: March 1997 tornado/floods	200,000	1,000,000	1,200,000
Subtotal	23,315,000	109,464,000	132,779,000
States:			
Potential spring floods ³	3,000,000	15,000,000	18,000,000
Flood plain easements ³	15,000,000	.....	15,000,000
Subtotal	18,000,000	15,000,000	33,000,000
CA, ID, WA, OR, NV: EWP flood plain easements	25,000,000	.....	25,000,000
CA, ID, WA, OR: Riparian area treatment	25,000,000	.....	25,000,000
CA, ID, OR, WA: Salmon memorandum of understanding: Watershed-based habitat restoration	37,600,000	78,100,000	115,700,000
Total	128,915,000	202,564,000	331,479,000

¹ Requires special authority for expanded debris removal.

² Requires special authority to address storm damage.

³ Flooding potential from 300-400 percent of normal snowpack melt.

EQIP

Senator COCHRAN. We talked about the EQIP Program earlier. I have some other specific questions about that, and what would happen if the States do not use all of their allocations in a fiscal year.

What happens to the money? Maybe you can answer that for me right now. If you cannot, you can answer that for the record.

Mr. JOHNSON. I am being told that if we do not use it, we lose it. I have a feeling we are going to use it. [Laughter.]

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FARMLAND PROTECTION PROGRAM

Senator COCHRAN. The Farmland Protection Program was one of those programs that is on my list of mandatory programs. But your budget, unlike some of the other mandatory programs, requests \$17.3 million for that program.

I assume that will conclude the funding for the program, and that will be the end. Is that a correct assessment?

Mr. JOHNSON. I think that completes the funding. I hope it is not the end.

Senator COCHRAN. Well, is that program worth continuing?

Mr. LYONS. Yes, sir.

Mr. JOHNSON. I believe it is, but I believe we need to continue to look at ways to be innovative in using it. As you know, it is—we are not—

Senator COCHRAN. You just pay farmers not to sell their property to developers, is that what it is?

Mr. JOHNSON. Well, first of all, we are putting funds to existing programs that are going on. And so we are helping State and local programs that have taken a look at themselves, in their home place, and recognized a real need to maintain good, high-quality, unique farmland, close to urban areas.

And so it is not our doing it here in Washington saying, "You ought to do that," but rather people at the local levels saying, "This is very important to us."

And then as a nation, we are committing to helping them with that. We do not go out and pay 100 percent of any easement, or that is not the idea. The idea is to work together with States and local governments that already have programs going. So it is a support system for them.

Mr. LYONS. Mr. Chairman, I think one of the benefits to this program is that it really is a partnership effort with States that have similar programs in place.

And having grown up in the urbanized East, I have seen a lot of farmland converted to condominiums. And it is a tremendous loss because, of course, some of the most productive soils we have are in or near these urban areas.

So I think there is a tremendous need. Certainly there is more need than we can satisfy with the resources that have been allocated to the program. We would certainly like to work with you to see if we could expand and improve the program.

RESOURCE CONSERVATION AND DEVELOPMENT

Senator COCHRAN. There is a provision in your budget that calls for an increase of \$3 million under the Resource Conservation and Development Program to fund 400 non-Federal watershed and rangeland coordinators in 25 States for high-priority watersheds.

What is the need for these 400 new positions that would be funded in this program? Why do we need these 400 new people?

Mr. LYONS. Mr. Chairman, actually I think the number is \$18 million in terms of the RC&D increase in that particular area.

The rationale is that there are mechanisms that are developing, have developed, in parts of the country that really mirror or use as a model the RC&D Program, where coordinators are brought in

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to help bring entire communities together to help guide conservation work done in particular watersheds.

We see a need or a value in using that as one alternative tool for reaching consensus on what kinds of improvements and conservation practices are needed in watersheds.

I would suggest that though one of the critical parts that has got to be linked to this is to make sure that we have the dollars in the conservation operations to provide the technical assistance to these watershed councils.

This is a program—or this is an idea, I should say, that has had its origins in Oregon where watershed councils have been established to deal with concerns related to loss of salmon habitat, for example.

We are working very closely with existing watershed councils, and with conservation districts that have assumed a similar role, to try and improve the delivery of conservation technical assistance in those watersheds to deal with the declines in salmon habitat and other resource degradation.

I think this is an area where we would like to work with the committee to see if we could not structure the most effective delivery systems, and capitalize on watershed councils and conservation districts, and RC&D's, and use them to the best benefit, to ensure we get the kind of delivery systems we need in place where appropriate.

CENTERS OF EXCELLENCE—1890 INSTITUTIONS

Senator COCHRAN. There is a provision in the budget request that talks about Centers of Excellence at the 1890 Institutions.

Do you know which institutions have been selected, or has there been a selection process to identify the Centers of Excellence around the country? Could you let us know which 1890 Institutions have been included in this list, and what that means in terms of what you are going to do for them?

Mr. JOHNSON. We will do that. We will get it in writing to you, what each center of excellence is about, and how it is being funded, and what we expect of it. Yes.

[The information follows:]

CENTERS OF EXCELLENCE

The Centers of Excellence Program was designed to establish partnerships between 1890 Institutions and USDA agencies. Each Center is to provide a USDA presence on the 1890 campus, enhance the capability of the Institution to assist in the delivery of USDA programs, ensure support from the agribusiness community, and provide assistance to outstanding students who commit to careers in USDA. Currently, NRCS has participated in the establishment of one Center.

In fiscal year 1995, NRCS established the Geographic Information System and Remote Sensing (GIS/RS) Laboratory at Lincoln University. The GIS/RS Laboratory laid the foundation for the Center of Excellence of Leadership in GIS and Wildlife Management at Lincoln University. In fiscal year 1996, NRCS contributed \$250,000 to the Center. In fiscal year 1997 and fiscal year 1998, it is estimated NRCS will contribute another \$250,000 for each year. Through the Center, Lincoln University will become nationally and internationally known for academic excellence in GIS and wildlife management.

Senator COCHRAN. Is there a specific line item in this budget request for funding the Centers of Excellence, or carrying out that program?

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Mr. JOHNSON. I do not believe there is a specific line item in it. We do not intend to increase it this year over where we were last year.

Senator COCHRAN. Does that money come from the conservation operations budget, or where does it come from?

Mr. JOHNSON. Yes; it is in our conservation operations.

Senator COCHRAN. Is that sort of a pot of money where nobody knows what you are going to do with it until you do it?

CONSERVATION OPERATIONS

Mr. JOHNSON. No; our conservation operations is not that at all. It really is the basic conservation program for the Nation on private lands.

Where it is allocated is based on needs and on strategic planning, and where we think we can get the greatest return in conservation on private lands in the Nation. It shifts from year to year.

As we get better at assessing land health and looking at partners that we can work together with to beef up the effort, we try to allocate it as best we can for that. I would not call it a huge pot of money. [Laughter.]

Senator COCHRAN. But I have noticed that that gets bigger. You know, the Secretary talked about how the budget for the service gets smaller.

Mr. JOHNSON. Yes.

Senator COCHRAN. Conservation operations seems to get bigger.

Mr. JOHNSON. Well, of course—

Senator COCHRAN. The mandatory programs seem to get bigger. I get the impression that is one way to keep this committee from having as much influence over how the money gets spent. [Laughter.]

Mr. LYONS. I do not think we—

Senator COCHRAN. Whether intended or not, I know it is not intended. [Laughter.]

Mr. LYONS. Mr. Chairman, I would—you know, I use the analogy of a toolkit to describe all the various conservation programs we now have in place. I would equate conservation operations to the funds that we use to hire the carpenters.

A toolkit is not worth much if you do not have people who know how to use it and apply it, and work with landowners. And that is why it is critical. And perhaps the request for those funds has increased simply because the demands are so much greater.

And the Congress has created so many more new tools which are extremely valuable, but we have to have money to do it the old fashioned way, as they say, to get out on the ground and connect landowners with those tools, and then get the conservation work applied on the landscape as the landowners see their needs.

That is why conservation operations is critical. And frankly, if we can get more money in there, that would be great, because we need a lot more people out there applying those conservation tools across the landscape.

CONSERVATION TECHNICAL ASSISTANCE

Mr. JOHNSON. Mr. Cochran, I think that you need to be aware that the CO-1 budget, the conservation operations, this next year

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is larger because the watershed technical assistance has been thrown up into that.

If you look at where we have been over the last, oh, 15 or 20 years, we have been flat or declining in our technical assistance. And as I said in my earlier remarks, we have in the past put a much greater emphasis on this technical assistance out to land-owners.

And if you ask the private sector how we can get conservation on the land, the one that always rises to the top is more technical assistance. And that is out of that budget. In fact, that is that budget.

Mr. LYONS. Mr. Chairman, just one last point I would make, and I hope you have a copy of or have seen a copy of the "Geography of Hope" document that Paul and NRCS generated.

But there is an interesting table in here, and I will give you this copy that tracks trends in appropriations for technical assistance, financial assistance, in our land retirement programs, basically the three areas in which we work and focus.

And what this trimline shows, going back to 1934 when we first started doing business, is that funds for financial assistance have declined in real dollars over time, that the funding for technical assistance increased slightly, but really has been flat for the past, oh, 15 or 20 years.

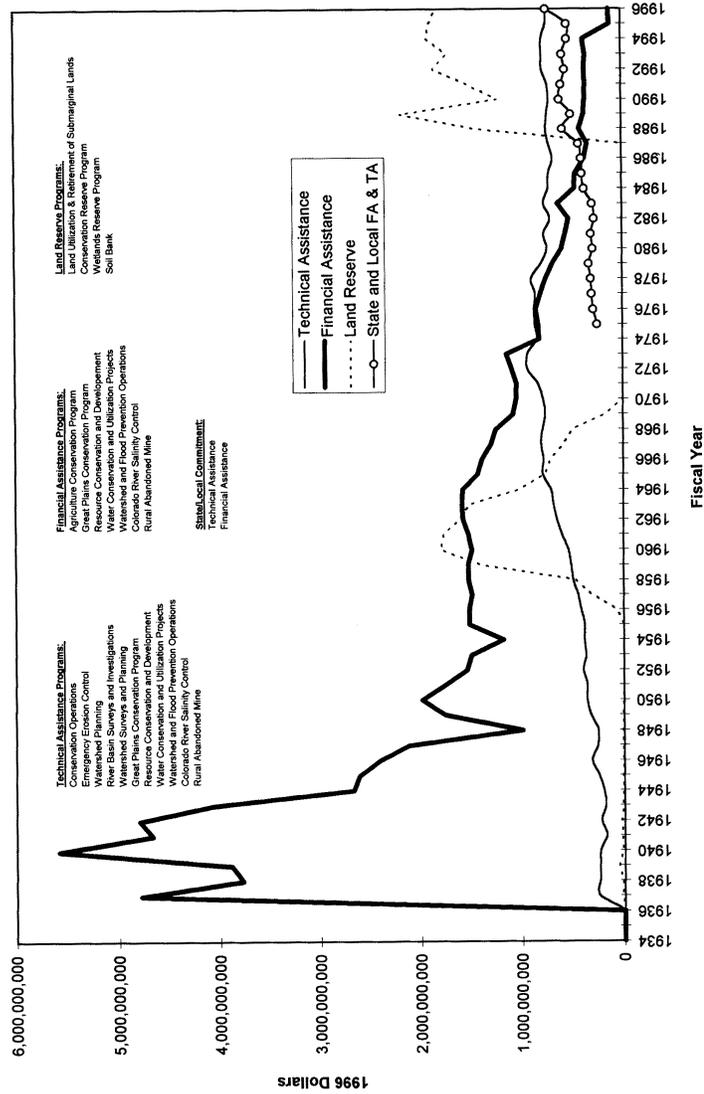
And, of course, the Land Reserve Program funding has increased, in part because we have moved toward creating programs like CRP and WRP, et cetera.

It is an interesting trimline, because as Paul said, we used to put a lot more money into conservation on the landscape in terms of financial assistance.

And the demand is increasing for technical assistance. But really that program has flat-lined, and I will be glad to share that with you.

[The information follows:]

Major U.S. Department of Agriculture, State, and Local Conservation Programs 1934-1996
Appropriations for Technical Assistance, Financial Assistance and Land Reserve
1996 Constant Dollars



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CLOSING REMARKS

Senator COCHRAN. Well, I think overall, we have to be impressed with the work that has been done in the conservation area to help protect our soil and water resources, and help assure that we have the capacity to continue to produce in an efficient way the food and fiber we need, and the huge exports that we see each year going out of this country.

It is a very impressive success story, in my opinion. I am quick to give credit where it is due in this area. I think the NRCS deserves a lot of credit, as well as the conservationists in the districts all over the country, especially in my State where they are very active. It is a serious effort that is being undertaken.

The State NRCS departments have worked hard on it. We have had a lot of emphasis in this area by State government in my State. A lot of people have done a lot of good work to bring us where we are today.

I do not have any other questions at this point. But I do have some which I will submit and Senator Bumpers may have some comments.

I am going to have to go to another meeting. And I am prepared now to turn over the gavel to this guy. We do not have a quorum so we cannot pass anything.

Senator BUMPERS. Mr. Chairman, you do not have to turn the gavel over. I am going to submit questions in writing to Mr. Lyons about three water projects in my State, Bethtensal, Palo Mato, and the prairie water systems. Those are becoming increasingly critical in our State.

And, you know, we produce 43 percent of the rice. In another 20 years, we will be producing about 10 percent of the rice if we do not do something pretty dramatic pretty soon.

SUBMITTED QUESTIONS

And I will phrase those questions in such a way—I think you are familiar with those things. I will submit those in writing, Mr. Chairman.

Senator COCHRAN. Thank you, Senator.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR COCHRAN

CONSERVATION OPERATIONS

MOLOKAI SOIL AND WATER CONSERVATION DISTRICT

For fiscal year 1997, the Committee included \$250,000, for continued support of agricultural development and resource conservation in Hawaiian areas serviced by the Molokai Agriculture Community Committee.

Question. What assistance does NRCS provide in this regard?

Answer. NRCS provides technical assistance to the Molokai Soil and Water Conservation District (SWCD) and the farmers, ranchers, and other participants in the Molokai Agriculture Community Committee (MACC) program. The technical assistance NRCS provides is funded from the NRCS budget, not the \$250,000 appropriation to the SWCD for the Molokai Agriculture Community Committee program. The SWCD uses the \$250,000 appropriation for cost sharing conservation project applications and administrative costs.

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The technical assistance NRCS provides is mainly focused on preparing and implementing natural resource conservation plans. Implementing these conservation plans involves designing irrigation systems, grazing management systems, windbreaks, and other resource conservation practices. In addition, NRCS provides educational and technical assistance to the clients they serve. NRCS also provides work space, equipment, and training to the MAC and SWCD staff.

Question. Is funding for this activity included in the budget request for fiscal year 1998? How much is included?

Answer. NRCS did not specifically request funds for the MAC in the fiscal year 1998 budget. However, every year since fiscal year 1992, the Molokai Soil and Water Conservation District (SWCD) has spent \$250,000 for the Molokai Agriculture Community Committee (MACC) program.

BAYOU METO AND BOEUF/TENSAS AREAS

For fiscal year 1997, the Committee directed NRCS to continue supporting programs related to Bayou Meto and Boeuf/Tensas areas and to continue planning and design activities in the Kuhn Bayou project, all in Arkansas.

Question. Please provide for the Committee an explanation of the work completed to date on these projects, and estimates of the funds needed in the future, by fiscal year, to complete each of these projects. What is included in the fiscal year 1998 request for each of these?

Answer. Work has continued on the Bayou Meto, Boeuf/Tensas and Kuhn Bayou projects in 1997 which was the third year of this effort at the direction of Congress.

Specifically in Bayou Meto, the inventory work for the on-farm part of the work is now complete and the report is being reviewed by the sponsoring local organization. Public meetings to inform the public of the results of these studies and the establishment of a hydrology data base will be carried out during the remainder of this year. The Corps of Engineers has been authorized to plan a flood control/irrigation project in this area and NRCS will play a major role in that effort with funding anticipated from the COE.

Boeuf/Tensas local sponsors continue to inform the public of the water decline and water quality status. They are in the process of organizing an irrigation district. NRCS is working on developing geographic information system (GIS) data for use in the study. Work is about 50 percent complete on this project.

Kuhn Bayou is part of the Eastern Arkansas project and NRCS is performing some of the survey and design functions for this project. A natural resources conservation plan has been developed. The sponsors are seeking funding sources for implementation.

The fiscal year 1998 budget request contains funds which could be used for these projects.

LOESS HILLS OF IOWA

For fiscal year 1997, \$400,000 was included for continuation of the pilot program to address erosion in the Loess hills of Iowa.

Question. What is the status of this pilot project? When is it scheduled to be completed? How much will this project require, by fiscal year, to complete? What funds, if any, are included in the fiscal year 1998 request.

Answer. Fiscal year 1997 funds have been provided to the Loess Hills Development and Conservation Authority (LHDCA). The LHDCA is an entity that was created by the Iowa Legislature in 1993 to help deal with the special natural resource concerns in the deep Loess area of the State.

The funds are being used together with state appropriations to provide cost-share to local units of government that are installing stream channel grade stabilization measures on targeted degrading streams. Fiscal year 1997 funds have been obligated for structures in 11 counties. In addition to the \$400,000 in Federal funds, \$1,012,000 in State and local funds are being committed to these projects.

Projects receiving fiscal year 1997 funds should be completed by the end of this calendar year, and the 1998 budget does not specifically identify funds for the pilot program.

The issue will require approximately \$24.1 million in Federal and State funding over the next 10-12 years in order to complete needed installations. Local leaders are suggesting that this amount be split evenly from Federal and State sources. Additional local dollars will be used to supplement these funds, and to operate and maintain channel stabilization measures.

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FRANKLIN COUNTY LAKE

Funding of \$750,000 was included in the fiscal year 1997 appropriations for Conservation's Operations to provide design and technical assistance in Franklin County, Mississippi.

Question. What is the status of this project?

Answer. In fiscal year 1997 NRCS received \$550,000 for the Franklin County Lake to complete the in-house engineering design, soil mechanics work and A&E for final spillway design. An interagency agreement was prepared to transfer \$300,000 from NRCS to the US Forest Service to be used for land acquisition and exchange support, securing permits, environmental mitigation and support for removal of timber.

The work is on schedule and construction plans specifications are currently being initiated. The design is to be completed this fall and ready for construction next fiscal year.

Question. What environmental and economic benefits will be realized upon completion of this project?

Answer. The project is expected to provide recreational benefits to the citizens of Franklin County as well as Mississippi and surrounding states. A mitigation plan is being completed to assure that fish and wildlife and other environmental benefits are maximized for the project area.

Question. What funding is included in the fiscal year 1998 request?

Answer. No specific funding is included in the fiscal year 1998 request. However, the fiscal year 1998 budget request contains funds that could be used for the project.

GREAT LAKES BASIN PROGRAM

For fiscal year 1997, \$250,000 was included to continue work on the Great Lakes Basin Program for soil and erosion and sediment control.

Question. What is the status of the project? Are there other federal agencies which contribute funding for this project? Which agencies and how much is each contributing?

Answer. This project has been active since its inception in 1991. No other federal agency contributes funding for this project. NRCS is contributing \$350,000 in fiscal year 1997.

Question. What is the timetable to complete this project? What funding will be needed in each fiscal year to complete this project?

Answer. The project is expected to continue through the year 2002. \$750,000 will be needed in each fiscal year through the year 2002 to complete this project.

Question. How much is included in the fiscal year 1998 budget request?

Answer. \$750,000 is available in the fiscal year 1998 budget request for this project.

GREAT LAKES WATERSHED INITIATIVE

For fiscal year 1997, the Committee stated its expectation that the Department provide technical assistance and funding to assist the Great Lakes watershed initiative.

Question. What is the status of this project?

Answer. Twelve demonstration farms, six in the Lake Erie drainage and six in the Lake Ontario drainage, are currently being established. The next phase of compiling data and analyzing results on practices such as integrated pest management, constructed wetlands for dairy facilities, bark bed filter strips, grass filter strips, stabilized livestock crossing systems, chemical mixing and rinsing pads, packed gravel barnyard treatment systems and alternative watering systems has been initiated.

Question. What is the timetable to complete this project? What funding will be needed in each fiscal year to complete this project?

Answer. This initiative is scheduled to run through the year 2002. NRCS technical assistance funds in the amount of \$75,000 will be needed each fiscal year through the year 2002.

Question. How much is included in the fiscal year 1998 budget request?

Answer. \$75,000 is available in the fiscal year 1998 budget request.

CHESAPEAKE BAY

The Committee provided \$4.75 million for continued work on the Chesapeake Bay.

Question. What is the nature and status of this work? What are the environmental benefits of this work?

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Answer. This work entails providing technical assistance to farmers throughout the Chesapeake Bay drainage basin to plan and install best management practices (BMP's) to control runoff, reduce erosion, manage nutrients and pesticides, and improve and maintain wildlife habitat. Specific accomplishments to date include the installation of nearly 1,500 animal waste systems to safely contain manure, nutrient management plans on over one million acres to keep nutrients from washing into or infiltrating water supplies, dead bird composting facilities on more than one third of the poultry operations to reduce the volume of carcasses, kill pathogens, prevent odors and protect water quality and resource management systems have been applied to more than 100,000 acres to reduce erosion and water runoff from agricultural land. Integrated pest management is now being practiced on over 1.2 million acres in the basin. About 3,000 acres have been enrolled in the Wetland Reserve Program. The work is on schedule to reach the goal of a 40 percent reduction of nutrients in the Bay by the year 2000.

Environmental benefits include improved water quality in the Bay and its tributaries, through a reduction of sediment, nutrients and pesticides. Improved wildlife/fisheries habitat in the Bay and throughout its drainage basin is also an environmental benefit.

Question. How much funding will be needed, by fiscal year, to complete this project?

Answer. A base level of \$4.75 million will be needed through fiscal year 2000 to reach the primary goal of a 40 percent reduction of nutrients the Bay.

Question. How much is included in the fiscal year 1998 request?

Answer. The fiscal year 1998 budget request includes \$4.75 million to continue this work.

GIS CENTER FOR ADVANCED SPATIAL TECHNOLOGY

The Committee has supported the GIS Center for Advanced Spatial Technology in Arkansas and its work with digital soil maps and the continuation of the National Digital Orthophotography Program.

Question. Has NRCS maintained its strong relationship with the center and has NRCS remained the lead agency within the USDA for the development of GIS capabilities?

Answer. Yes, the NRCS has continued to maintain a strong relationship with the GIS Center for Advanced Spatial Technology (CAST) in Arkansas.

The NRCS is a leader within the USDA for the development of digital GIS information such as the digital orthophotography, soils databases and Natural Resource Inventory (NRI) databases. The Forest Service is also a major user of GIS within the USDA. With the increasing availability of digital geospatial databases, the NRCS is using GIS technology in more offices than ever before. GIS is being used at all levels of the organization, this includes the field service centers, state, regional and national headquarters offices.

We foresee the largest use of GIS will happen at the field service center level. The NRCS has about 300 sites presently using GIS. The NRCS and the Farm Service Agency are currently working on a GIS Business Process Reengineering project with the goal to provide improved services to USDA customers by using GIS and digital geospatial data. We believe business processes which acquire, access, analyze, update, share and display geospatial data may have the greatest potential to increase information accuracy, data-sharing and at the same time reduce duplication and customer time spent at the field service centers.

MUD RIVER DAM PROJECT

The Committee in fiscal year 1997 encouraged the Department to continue working on the upper MUD River Dam project in West Virginia.

Question. What is the status of this project? What other Federal or State agency's funding is available for the project? What funds are needed, by fiscal year, to complete this project? How much is included in the fiscal year 1998 budget request?

Answer. The Upper Mud River Watershed Project is about 95 percent completed. A contract for the recreation facilities was awarded and construction is underway for the final recreation phase. A contract for dam repairs is planned to be awarded in April 1997, with work beginning in June 1997. All work will be contracted in fiscal year 1997 and project completion is expected by December 1997. No fiscal year 1998 budget request is anticipated.

MISSISSIPPI DELTA WATER RESOURCES STUDY

The Committee provided fiscal year 1997 funding for the Mississippi Delta water resources study at the fiscal year 1996 funding level.

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Question. What is the status of this study?

Answer. The Mississippi Delta Water Resources Study is approximately two-thirds completed with about 75 percent of the needed data collected. Draft reports have been prepared. Approximately 5 staff years will be dedicated to this project from within NRCS and the remaining staff time needed will be from other sources.

Question. What funds are needed, by fiscal year, to complete this study? How much is included in the fiscal year 1998 budget request?

Answer. The study is scheduled for completion at the end of fiscal year 1997. No funds are requested for the study in the fiscal year 1998 budget.

GOLDEN MEADOW, LOUISIANA PLANT MATERIALS CENTER

The Committee provided \$100,000 to Golden Meadow, Louisiana, Plant Materials Center for fiscal year 1997 to facilitate the testing of application technologies in the development of an artificial seed for smooth cordgrass.

Question. What is the status of the project?

Answer. The project has gone well. Protocols have been worked out that permit production of artificial seed at will. The plan is to produce large numbers of them during the spring of 1996 in order to establish field plantings. The field plantings will evaluate establishment and survival characteristics under different environmental conditions. Depending on the success of field plantings, it may be necessary to "fine-tune" planting methodology and/or production techniques of the artificial seed.

Question. What funds are needed, by fiscal year, to complete this study? How much is included in the fiscal year 1998 budget?

Answer. The 1998 budget will continue funding at a comparable level in order to maintain the momentum and progress that has already been achieved. A funding level of \$150,000 annually would allow for completion of the project by the year 2001.

CROWLEY, LOUISIANA, RICE RESEARCH STATION

Question. Has the NRCS continued its work with the Crowley, LA, Rice Research Station on the development of additional species which will help stop erosion on inland wetlands and barrier islands? What programs have the NRCS helped with the Station? How much is requested in your fiscal year 1998 budget to help with this research?

Answer. The relationship between the NRCS and Crowley Rice Research Station has been a productive one which has led to development of an artificial seed for smooth cordgrass. This species can be very effective in reducing erosion on inland wetlands and barrier islands. Since the species seldom produces viable seed, however, a unique approach of using artificial seed was adopted to provide adequate materials. The effort has now reached the point where field testing will be undertaken.

Another species, California bullwhip, with proven erosion control characteristics also has potential for tissue culture work. This is being considered by the Research Station, and preliminary evaluations of their potential are being undertaken in order to develop a new release. NRCS has helped the Station in identifying those species that: have both the greatest application for conservation uses, and the potential for tissue culture work. NRCS also assists in field testing of new materials and has been able to accelerate such efforts through productive interactions with the Station. Examples include: efficiency of transplant methodology and hydro-mulching of artificial seed. Continuation of the interaction between NRCS and the Crowley Rice Research Institute would cost \$125,000 in fiscal year 1998.

RESEARCH ON NUTRIA-RESISTANT MATERIALS

The Committee provided in fiscal year 1997 \$150,000 to continue a program for research on nutria-resistant materials.

Question. What is the status of this research and the location where the research is on-going?

Answer. The work to date has focused on smooth cord grass with an underlying strategy of producing sufficient plants in a restoration effort to survive impact of nutria activities. The effort has reached the stage where it can now be field-tested in 1996 on a broader scale. Previous evaluations have been undertaken at the Crowley Rice Research Station. Current plans are to establish 10 evaluation plots in Cameron Parish, LA. It is estimated that restoration success can probably be achieved even with a 10-20 percent loss to nutria during plant establishment. Other options such as including chemical additives to gel capsules will be explored as warranted.

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Question. Is funding requested for fiscal year 1998 for this project? How much?

Answer. The 1998 budget proposes to fund this work at the current level of \$150,000 in order to maintain momentum that has been generated.

RURAL RECYCLING AND WATER RESOURCE PROTECTION INITIATIVE

The Committee provided \$3 million for the continuation of the multiyear rural recycling and water resource protection initiative in the Mississippi Delta region of Louisiana, Arkansas and Mississippi.

Question. What is the status of this project?

Answer. The project is approximately one third complete.

Question. What funds are needed, by fiscal year, to complete this initiative? How much is included in the fiscal year 1998 budget request?

Answer. Approximately \$3 million is needed in each fiscal year from 1998 through fiscal 2002 to complete the initiative. The fiscal year 1998 budget request includes \$3 million for the rural recycling and water resource protection initiative.

NEW YORK CITY WATERSHED AGRICULTURE PROGRAM

Question. How did the Department assist in the evaluation of the New York City Watershed Agriculture Program? How much money does the fiscal year 1998 budget request for this program?

Answer. The Congressional earmark stated that NRCS would assist the Watershed Agricultural Council with the evaluation of its programs to be conducted by EPA in 1997. To date there has been no contact from the Watershed Agricultural Council or EPA indicating the assistance they desire from NRCS. The 1998 budget did not include a specific request for this program.

INDIAN CREEK WATERSHED PROJECT

How is the Department providing assistance to complete the Indian Creek Watershed project in Mississippi in fiscal year 1997?

Question. What is the status of this project?

Answer. The plan for the Indian Creek Watershed in Mississippi has been completed by NRCS and is now undergoing review here in the National office. Planned works of improvement provide flood protection to approximately 350 socially and economically disadvantaged residents and business owners in the rural community of Luka, Mississippi. The cost of the project is estimated at \$3.6 million and the benefit/cost ratio is 0.3/1.0.

Question. What funds are needed, by fiscal year, to complete this initiative? How much is included in the fiscal year 1998 budget request?

Answer. Approximately \$3.06 million of Public Law 83-566 funds would be needed to implement this project. The project will compete with other approved projects for funding.

TRINITY BASIN COOPERATIVE STUDY

The Committee urged the Department in fiscal year 1997 to provide necessary funding to meet Federal obligations to complete the upper Trinity basin cooperative study in Texas.

Question. What is the status of this study?

Answer. The study is progressing well. This is the fifth year of this seven year study being carried out with the Tarant County Water District.

Question. How much is the Department providing in fiscal year 1997? How much is in the fiscal year 1998 budget request for this study?

Answer. Funding for fiscal year 1997 was \$200,000 and is being used for further development of the SWAT model to include in stream dynamics. With that capability, the model will be able to be linked with several EPA models such as WASP4 for reservoirs. In addition, extensive sampling and monitoring of streams is being carried out so that the model can be calibrated to existing conditions. The fiscal year 1997 funding should provide enough money to complete the project.

MONROE COUNTY, WEST VIRGINIA, PLANT MATERIALS CENTER

In the fiscal year 1997 Committee report, the Department was instructed to begin construction of the plant materials center in Monroe County, West Virginia, from funds earmarked for this purpose in previous appropriations.

Question. What is the status of this plant materials center?

Answer. The conceptual design package dealing with buildings to be constructed at the plant materials center is nearing completion. It is scheduled to be reviewed by the end of March so that bids can be received. In late April, it is anticipated that

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the contract can be awarded for the construction of buildings. Construction should begin later this summer.

Question. What is the amount that the Department will use in fiscal year 1997 for this project? How much money is in the fiscal year 1998 budget request for this project?

Answer. The fiscal year 1997 budget estimate for this plant materials center being constructed at Alderson, West Virginia is \$401,000. We anticipate that the funding level for fiscal year 1998 will be the same.

Question. Does the Department have a feasibility study on the establishment of this plant materials center? When will you provide it to the Committee?

Answer. During the course of the development of the fiscal year 1996 appropriations bill and the accompanying report, agency officials discussed with Subcommittee staff several ways to approach the plant materials center in West Virginia. As those discussions concluded, the Subcommittee staff relayed that it was decided to include language which would direct the construction of this center utilizing funds normally included in the appropriations for this program. Even though a feasibility study was discussed, the usefulness of the center and the Subcommittee's intent was clear. Therefore, no agency staff time or funds were dedicated to a study and we have proceeded with design and anticipated construction of the plant materials center.

NATIONAL NATURAL RESOURCES CONSERVATION SERVICE FOUNDATION

Question. The Committee included bill language in the fiscal year 1997 Appropriations bill which allowed up to \$250,000 of conservation operations to be used for the National Natural Resources Conservation Service Foundation. How much did the Department provide in fiscal year 1997?

Answer. The Department did not Fund the Foundation in fiscal year 1997. A small amount of staff time was used to collect the nominations for the Board, file them, and to respond to questions about the status of the Foundation.

Question. How much is requested in the fiscal year 1998 budget?

Answer. No funds are requested for the Foundation in fiscal year 1998 because some members of Congress have questioned using Federal funds for this purpose.

WATERSHED AND FLOOD PREVENTION OPERATIONS

DEVIL'S LAKE BASIN

Question. Please provide a summary of the situation in the Devil's Lake basin, the actions that NRCS has taken to address this situation, and the funding included in the fiscal year 1998 request to address this problem.

Answer. Devils Lake residents and agencies are preparing for a lake level of 1,440.5' in June. The snow pack is still heavy with 3" of stored moisture. The Corps of Engineers is raising the City of Devils Lake dikes to 1,440 for spring runoff. The North Dakota Department of Transportation is raising three state highways and one federal highway to 1,440 and adding erosion barriers. The North Dakota Soil and Water Commission is promoting the As Soon As Possible (ASAP) wetland restoration program, and with the newest 70 applications will achieve 10,200 acre-feet of storage.

NRCS is participating on the Devils Lake Interagency Task Force and assisting the State of North Dakota in implementing the Devils Lake Emergency Response Plan for Upper Basin Water Retention.

Eight NRCS Field Offices are providing priority scope and effect determinations where health and safety are issues.

NRCS detailed the Watershed Regional Technology Team from Lakewood, Colorado to develop a comprehensive water management plan for the St. Joe and Calio Sub-Watershed Basins.

NRCS is working with the Devils Lake Task Force to develop comprehensive water management plans in nine sub-basins over a 9 year period. The expected cost is \$4.3 million and a funding source has not yet been identified. However, the Basin has been declared a priority area for both the Conservation Reserve and Environmental Quality Incentives Programs.

WATERSHED PROJECTS STATUS

The Committee expressed its expectation that work continue on the Little Sioux and Mosquito Creek watersheds in Iowa; the Little Auglaize watershed in Ohio; Little Whitestick-Cranberry Creek in West Virginia; the Potomac headwaters in West Virginia; and Virgil Creek in New York.

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Question. What is the status of each of these projects? What is the timetable for completion for each of these projects? What funding will be needed in each fiscal year to complete each project?

Answer. The Little Sioux Watershed Project in Iowa is one of the eleven watersheds authorized under the Flood Control Act Public Law 78-534. The project received directed funds of \$1.4 million in fiscal year 1997 and is about 68 percent completed. The remaining structural work could be installed by 2016 at an annual cost of \$750,000 and the remaining land treatment could be applied by 2041 at an annual Federal cost of \$1,400,000.

Mosquito Creek Watershed in Iowa is authorized under the Watershed Protection and Flood Control Act Public Law 83-566. The project received directed funds of \$100,000 in fiscal year 1997 and is about 85 percent completed. Expected future funding needs are about \$1.5 million.

The Little Auglaize Watershed in Ohio is authorized under Public Law 83-566 for flood control. The project received directed funds of \$1.3 million in fiscal year 1997 and is about 95 percent completed. At present funding levels and Ohio priorities, the project will be completed in fiscal year 1999.

Little Whitestick-Cranberry in West Virginia is authorized under Public Law 83-566 and received directed funding of \$3.4 million in fiscal year 1997. This installs the first phase of the project and the remaining needs are about \$3.0 million.

Potomac Headwaters Watershed is a large Public Law 78-534 project in West Virginia, Virginia, and Maryland and is administered by West Virginia. The project received \$2.3 million in directed funds in fiscal year 1997 and the remaining needs are about \$80 million. A portion of the fiscal year 1997 funds are being utilized to begin Community-based Comprehensive Resource Management Plans where 1996 floods occurred.

Virgil Creek Watershed in New York is a Public Law 83-566 Flood Prevention project with a single dam. The project received directed funds in fiscal year 1997 of \$2.0 million to contract for the first phase of the dam. Every effort will be made to direct the remaining \$2.5 million in fiscal year 1998.

Question. How much is included in the fiscal year 1998 budget request for each of these projects?

Answer. No project specific budget requests are made by NRCS for Public Law 83-566 and Public Law 78-534. The Watershed Protection and Flood Prevention Operations appropriation is allocated according to the quality of the approved projects, their contributions to the NRCS Strategic Plan, and commitments of sponsors.

LOWER AMAZON AND FLAT CREEK PROJECT

The Committee encouraged the Department in the fiscal year 1997 Appropriations bill to work with local government entities and using other conservation programs in Oregon to provide assistance on the Lower Amazon and Flat Creek project.

Question. What is the status of this project? Which local government entities is the Department working with? Were other conservation programs used? If so, which ones?

Answer. The Lower Amazon and Flat Creek project is a proposal to modify existing flood control measures to restore flood plains and wildlife habitat near Eugene, Oregon. The project is in active planning by the U.S. Army Corps of Engineers, Bureau of Land Management, Natural Resources Conservation Service, City of Eugene, and the Lane County Council of Governments. Opportunities for other conservation programs are being examined, including State of Oregon as well as USDA Wildlife Habitat Incentives Program and the Wetland Reserve Program.

Question. How much money is requested in the fiscal year 1998 budget for this project?

Answer. Again, no project specific fiscal year 1998 budget proposals have been made by NRCS.

WEST VIRGINIA RESOURCE MANAGEMENT PLANS

The Committee directed the NRCS in the fiscal year 1997 Appropriations bill to provide resources to complete resource management plans for communities in West Virginia where the 1996 floods occurred.

Question. What is the status of these community-based comprehensive resource management plans?

Answer. NRCS in West Virginia has provided the necessary resources to complete innovative community-based comprehensive resource management plans for communities devastated by the floods of 1996. fiscal year 1997 funds were made available from the Potomac Headwaters Public Law 534 allocation and is being used to secure

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an A/E consulting firm to develop a North Fork South Branch Potomac River Watershed Plan. The consultant will work under the direction of a NRCS Community Based Assistance planner and will provide direct assistance to the local resident North Fork Watershed Committee.

Question. What is the amount of necessary resources provided in fiscal year 1997? How much is requested in the President's fiscal year 1998 budget?

Answer. \$300,000 was made available in March, 1997, and no specific additional needs or budget requests have been identified for fiscal year 1998.

WATER STORAGE AND DELIVERY SYSTEMS ON HAWAII AND MAUI

Question. How has the Department enhanced the water storage and delivery systems on the islands of Hawaii and Maui as the Committee directed in the fiscal year 1997 Appropriations? How much does the Department estimate that it will cost to enhance these systems? How much is requested in the President's fiscal year 1998 budget?

Answer. NRCS and Hawaii state sponsors have developed three water storage and delivery system plans on the islands of Hawaii and Maui under authority of the Watershed Protection and Flood Control Act Public Law 566.

On Maui, the Upcountry Maui Watershed Plan/Environmental Impact Statement (EIS) proposes storage and a distribution system to irrigate 473 acres in Upper Kula, supply irrigation water for the Hawaiian farmers in the Department of Hawaiian Homelands Keokea agriculture plots, and better utilize Other Important farmland. The project also relieves the demands on the Olinda Water Treatment Plant and will aid potable water supplies. The total cost of the project is \$9.0 million with about 49 percent paid by the local sponsors. The Final Plan/EIS is complete.

On the Big Island of Hawaii, two water storage and delivery system projects are developed. The Waimea-Paauiilo Draft Plan/EIS has been completed. The Plan proposes a 131 million gallon reservoir at Kauahi, a reservoir supply line, extended irrigation system, and a livestock drinking water distribution system. The project will serve 167 farmers on 1,985 acres and 265 ranchers on 22,900 acres. Most of the farmers and ranchers are of native Hawaiian ancestry. Total installation will be \$17.4 million.

The Lower Hamakua Watershed Project on Hawaii was initiated in response to serious social and resource problems that followed the failure of a major sugar plantation. The draft Plan/EIS is being revised to address botany, stream archaeology, and land rights. Preliminary costs are \$5.0 million.

Again, no project specific budget requests are made by NRCS for Public Law 566. The Watershed Protection and Flood Prevention Operations appropriation is allocated according to contributions to the NRCS Strategic Plan, quality of plans and readiness of sponsors.

EWP FUNDING TO MISSISSIPPI COUNTIES

Question. How much did NRCS allocate to the following Mississippi counties with EWP funds appropriated for fiscal year 1997: Adams, Alcorn, Clairborne, Covington, DeSoto, Forrest Grenade, Hinds, Holmes, Itawamba, Jones, Leake, Lee, Lowndes, Madison, Monroe, Neshoba, Panola, Perry, Pontotoc, Prentiss, Rankin, Tippah, Union, Warren and Yazoo. How much is requested in the President's fiscal year 1998 budget for these counties? What is the status of the emergency watershed needs for each of these counties?

FIRST GROUP UNDER WATERSHED AND FLOOD PREVENTION OPERATIONS

	Fiscal year 1997 appropriation	Status of needs
Adams	\$5,463,000	\$1,500,000
Alcorn		300,000
Clairborne		500,000
Covington		200,000
DeSoto		1,000,000
Forrest		1,000,000
Grenada		600,000
Hinds		3,000,000
Holmes		500,000
Itawamba		200,000

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FIRST GROUP UNDER WATERSHED AND FLOOD PREVENTION OPERATIONS—Continued

	Fiscal year 1997 appropriation	Status of needs
Jones		500,000
Leake		200,000
Lee		1,500,000
Lowndes		200,000
Madison		5,000,000
Monroe		200,000
Neshoba		500,000
Panola		200,000
Perry		100,000
Pontotoc		200,000
Prentiss		200,000
Rankin		1,500,000
Tippah		200,000
Union		200,000
Warren		300,000
Yazoo		200,000
Total	5,463,000	¹ 20,000,000

¹This need for \$20 million for Emergency Watershed Protection funds is a special authority within the President's request for Emergency Supplemental Appropriations for fiscal year 1997. This authority would allow NRCS to address damages in Mississippi from storms in 1991-94. EWP funding requests are not a part of the fiscal year 1998 budget process.

VERMONT PROJECTS

In the fiscal year 1997 appropriations bill the Committee encouraged the Department to complete work on the following projects in Vermont as funding allowed: Lower Otter and Dead Creek, Lemon Fair River, lower Winooski River, lower LaMoille River, lower Black River, and the Barton and Clyde River projects.

Question. What is the status and costs of each of these projects?

Answer. The Lower Otter and Dead Creek, Lemon Fair River, Lower Winooski River, Lower LaMoille River, Lower Black River, and the Barton and Clyde River projects received \$425,000 in directed funds in fiscal year 1997 for work on these projects. An additional \$60,000 is needed in fiscal year 1998 for completing them.

Question. How much is requested for each of these projects in the President's fiscal year 1998 budget?

Answer. No specific projects were identified in the fiscal year 1998 budget request.

WATERSHED PLANNING

ZUNI RIVER WATERSHED

The Committee provided fiscal year 1997 funding of \$300,000 for the Zuni River watershed.

Question. What is the status of work on this project? What is the timetable for completion of the project? What funding will be needed in each fiscal year to complete this project?

Answer. The Zuni River Watershed Act (ZRWA) was passed by Congress in August 1992 with the purpose of authorizing the development of a plan for the management of natural and cultural resources within the Zuni River Watershed and upstream from the Zuni Indian Reservation. An advisory group of 22 different agencies, groups, and individuals was formed to direct the development of a plan. A working group of eight individuals was organized to provide detailed guidance. Ten technical teams were formed to carry out the actual study. A full time coordinator has been provided by NRCS.

Accomplishments in fiscal year 1996 include the completion of field work by the Field Resource Inventory Team. This data became available for the technical teams to begin evaluating the watershed and developing recommendations. The field work by the Hydrology/Erosion Team was completed. This information will be the basis for the erosion assessment and recommendations. A field review by the Advisory Committee was held and landowners interviews were carried out.

Question. How much is included in the fiscal year 1998 budget request?

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Answer. Plans for fiscal year 1997 are to complete the project and issue the final plan in September 1997. A video is also planned for the presentation of the report. However, no additional construction costs were identified for the 1998 fiscal year.

LITTLE AUGLAIZE AND PINEY CREEK WATERSHEDS

The Committee expressed its expectation that work continue on the Little Auglaize watershed in Ohio and the Piney Creek Watershed in Mississippi.

Question. What is the status of the work on these watersheds? What is the timetable for completion of these projects? What funding will be needed in each fiscal year to complete each project?

Answer. The Little Auglaize Watershed is authorized under the Watershed Protection and Flood Control Act Public Law 566 for flood control. The project received directed funds of \$1.3 million in fiscal year 1997 and is about 95 percent complete. At the present funding levels and Ohio priorities, the project will be completed in fiscal year 1999.

Piney Creek Project is a sub-watershed within the Yazoo Watershed authorized by the Flood Control Act of 1944 (Public Law 534). Of the total Yazoo allocation to Mississippi, Piney Creek received about \$200,000 and installed two structures in fiscal year 1996. Allocations to the Yazoo are expected to continue at present levels with the Piney Creek share determined by state priorities.

Question. How much is included in the fiscal year 1998 budget request?

Answer. Again, no project specific budget requests are made by NRCS for Public Law 566. The Watershed Protection and Flood Prevention Operations appropriation is allocated according to contributions to the NRCS Strategic Plan, quality of plans and readiness of sponsors.

TECHNICAL ASSISTANCE FOR GANGLAND CONSERVATION

The Administration's request includes an increase of \$4.1 million for Conservation Technical Assistance for training for gangland conservation and the improvement of conservation district skills.

Question. The budget states that the money requested will be supplemented with up to \$944,000, for a total of \$5 million to train NRCS staff. From which account does this supplemental money come?

Answer. The additional \$944,000 that may be utilized to implement the grazing lands training program will come from a variety of sources. Conservation Technical Assistance funds can be used to support the training if necessary. Additionally, funding may be leveraged with those from federal, state and local partners to provide training to a wider audience that would include representatives from federal, state, and local governments, industry, private livestock producers and the public. Participating partners may include the member organizations of the National GULCH Steering Committee, Conservation Districts, Universities, and others.

Question. How many full-time equivalent employees will be hired with these additional funds?

Answer. The funds have not been requested to hire new federal employees. However, approximately 1,000 employees will benefit from this training. A majority of the training will be developed to include a variety of partners, including university, extension, industry, private grazing land owners and managers, as well as the public that benefit from properly managed grazing lands.

DIGITIZATION OF THE GEOGRAPHICAL INFORMATION SYSTEMS

The President's fiscal year 1998 request proposes an increase of \$10 million to accelerate the recent rate of acquisition of the digital orthophotography maps and data digitization. The request states that an increase from the base of \$7.5 million would allow USDA to continue the 1997 initiative of providing the service centers with digital orthophotography map and digitized soil survey data for completed soil surveys for the entire United States in about 9-10 years.

Question. Should less than \$10 million be available for this function, how does one calculate the rate of digitization?

Answer. This money will be used to accelerate both soil survey digitizing, and the production of digital orthophotography. However, before the soils can be digitized, two significant business processes which constitute two-thirds of the work involved to develop a digital product must be completed. First, the older soil maps must be updated and recompiled to fit the new accurate orthophoto base map. The updated maps are quality controlled for accuracy and matching to adjoining maps. Second, information about the soils such as descriptions and soil correlations must be completed. The digitizing process itself is usually the least expensive and time consuming of the three major business processes. The rate of digitizing alone is based

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on the complexity of the individual soil survey areas. In areas where the soil surveys are complex, mapping of the soils to the new digital orthophotography base map and digitizing requires more time as compared to areas where the patterns of soils and the detail on the maps are not as complex. Based on our experience, the average cost to just digitize a soil survey area is \$20,300. If less than the \$10 million is available for digitizing soil surveys, fewer soil survey areas will be digitized based on the cost for digitizing.

The rate of digital orthophotography production is calculated on a single map basis, approximately \$1,000 per digital orthophoto map. An average county has approximately 70 maps for complete coverage, this translates to an average of about \$70,000 per county.

To ensure easy access to soils and natural resource information by our customers and partners, the NRCS goal is to have the digital orthophotography and digital soils data completed for the nations private lands by the year 2002. This date matches the USDA target for putting geographic information systems (GIS) in Field Service Centers to improve business process efficiencies, reduce duplication and improve customer satisfaction. If \$10 million is made available, the acquisition of digital orthophotography and the digitizing of soils will be completed in year 2003. If the \$10 million is not approved, the acquisition of digital orthophotography and the soil digitizing will not be completed on schedule.

Question. How will the work be accomplished without additional USDA employees being added to the payroll if the \$10 million increase requested is provided?

Answer. The additional \$10,000,000 being requested is to accelerate the digitizing and acquisition of digital orthophotography initiative started in fiscal year 1997. In fiscal year 1997, we are putting into place an infrastructure of people and technology to provide quality digitized soil surveys. Once this infrastructure is operational and the staffs are sufficiently trained, our digitizing capacity will be greater than it currently is. Taking advantage of this increased production capacity will not require adding more people to the payroll of NRCS. In addition, we plan to increase the amount of digitizing to be contracted. Re-direction of staff already employed by the agency for this accelerated initiative will provide more staff years to do this work.

Digitizing the soil maps is only part of the work that has to be done to provide a quality product as we transition the soil survey program from one originally designed to produce hard-copy publications to one that develops maps and related soil descriptions and correlations into digital format. Having the maps and associated resource data developed for use in an information system that is accessible by the public allows many customers to produce their own information without having the NRCS to do it all for them. Bringing older soil survey information to up-to-date standards is a heavy workload, but must be done to ensure that the maps and related data match between differently soil surveys. This will take several years to complete as the soil surveys that we call modern soil surveys have been conducted over the last 50 years. With the changing needs of modern customers, this has left us with a patch work quilt of soil surveys across the nation. Some surveys meet current needs, however many do not meet current standards. We estimate that about 20 percent of the soil surveys are out of date, and need some form of updating to meet customer expectations. This would be about 400 soil surveys. This updating requires field mapping work, and associated quality assurance checks to ensure our surveys meet the National Cooperative Soil Survey quality standards.

No additional employees will be needed to acquire digital orthophotography since the work is contracted to the private sector. The US Geological Survey administers the digital orthophotography contract, and staffing is already in place for this function. Digital orthophotography is delivered to the NRCS in a form ready to use in a GIS and for soil mapping and digitizing.

SOIL SURVEY RESOURCE INFORMATION

The fiscal year 1998 budget request proposed an increase of \$5 million to fund 75 Full Time Equivalents (FTE) to prepare 2,400 completed soil surveys for digitizing and to provide information to update soils data.

Question. Would this function be completed in fiscal year 1998? If not, when will you expect to finish this function and how much more money would you anticipate needing for those fiscal years beyond 1998?

Answer. The initiative for updating soils data in association with the digitizing of soil survey areas was proposed for a 6 year project funded at \$5 million each year. Soil Survey information, like any other kind of information, must meet the current needs of customers if it is to remain useful. Soil Survey information is now available for about 94 percent of the nation's privately owned land and for about 76 percent

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of the entire country. The soil surveys we call modern soil surveys have been conducted over the last 50 years, and with the changing needs of modern customers that has left us with a patch work quilt of soil surveys across the nation. Some meeting current needs, some not. This \$5 million a year would be used to ensure critical data needed to provide current interpretations would be available for those soil surveys digitized. This would not however, do the entire job of bring all soil surveys up to current standards

Question. Is the NRCS currently doing any soil surveys? If so, how much money will be allocated for these surveys in fiscal year 1998? How many will be completed in fiscal year 1998?

Answer. NRCS is currently conducting soil surveys in 640 areas that have not been previously mapped, and is updating older soil surveys in 224 areas where the information is no longer adequate to meet current customer needs. Assuming similar funding as we received in fiscal year 1997 we will allocate \$76.4 million dollars to this initiative. Of that approximately 25 percent or \$19 million is used in providing soil science expertise to assist the agency and our customers in the use of soil information. The remainder is used for soil survey and the associated support activities.

Approximately 50 to 55 soil surveys are completed each year.

TECHNICAL ASSISTANCE FOR RESOURCE CONSERVATION AND DEVELOPMENT PROGRAM

The fiscal year 1998 budget calls for an increase of \$18 million under the Resource Conservation and Development program to fund 400 non-federal watershed and rangeland coordinators in 25 states for high-priority watersheds.

Question. Which are the 25 states that have high-priority watersheds? Are these recently designated high-priority watersheds?

Answer. The states and the particular high-priority watersheds that would benefit from the assignment of coordinators have not been selected at this time. The selections of locations would be made by the Deputy Chief for Programs and the state conservationists based upon recommendations from the state technical committees, local leaders and partners. The list would be developed once funding for the coordinators was allocated.

ENVIRONMENTAL QUALITY INCENTIVES PROGRAM

The Department of Agriculture announced on March 19, 1997, preliminary state funding allocation for the Environmental Quality Incentives Program (EQIP). The Department allocated \$170 million for state priority areas. The remaining \$30 million will be allocated to the states when their final needs for technical, financial, and educational assistance are determined.

Question. It is estimated that NRCS will award 5,143 contracts costing approximately \$170 million over fiscal years 1997 and 1998. How did NRCS decide on this number of contracts and these costs?

Answer. NRCS conducted a workload analysis to estimate this information. For the analysis, we assumed that \$180 million would be available each year for financial assistance in contracts and that 10 percent, or \$20 million, of EQIP funds would be available for technical assistance costs related to operating the EQIP program. The actual technical assistance costs to carryout EQIP will be more than the \$20 million. Using our experience in the Great Plains Conservation Program and the Colorado River Salinity Control Program, which used long-term contracts, we assumed that an average contract would cost about \$35,000 based on about 40 percent of contracts would be at the \$50,000 per contract payment limit, and about 60 percent of contracts would average \$25,000 per contract. This results in 5,143 contracts per year.

Question. When do you think that the states' final needs will be assessed? How will the Department assess these needs?

Answer. The final allocations will be made when the final rule is effective. The preliminary funding information was distributed in March so that state conservationists could make decisions as to the amount of funds that are provided for significant state-wide natural resource concerns and the amount that will be allocated to each priority area. National guidance provides that at least 65 percent of the funds allocated to the State must be allocated to priority areas. However, the State conservationist, with the advice of the State Technical Committee and concurrence of FSA, may allocate a higher percentage to priority areas and less than 35 percent to significant state-wide natural resource concerns. The state funding decisions will be shared with the national office about April 7th. We will review them to ensure that on the national level 50 percent of the funds are targeted to natural resource concerns related to livestock production, and then finalize allocations.

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NEW WORLD MINE

Question. The Clinton Administration has offered \$65 million to Crown Butte Mines, Inc., in a cash deal to stop development of a proposed mine near Yellowstone National Park. To offset the \$65 million, the administration proposes deferring entry of 2 million acres into the Conservation Reserve Program (CRP) from 1997 to 1998. I understand this proposal will require legislative action. Is that correct?

Answer. Yes, legislation will be necessary to complete the proposed exchange of assets.

Question. Why did the Administration offer up CRP funds as an offset?

Answer. Since protecting the New World Mine is an important natural resource concern, it seemed appropriate to find an offset from another Federal natural resource protection program. The offset proposed from the CRP would provide the needed savings with limited impact on the program.

Question. How will this impact the CRP?

Answer. The impact on the CRP will be minimal. There will be no change in the maximum enrollment target for additional acreage for the two years combined, fiscal years 1997 and 1998. The target is to enroll 28 million acres over this period of which the amount for fiscal year 1997 will still be at least a very ambitious 17 million acres. The Administration's proposal will not reduce the amount of acreage eventually eligible for the CRP and we still intend to enroll the same 36.4 acres by 2002.

Question. CRP unobligated balances are essential to fund technical assistance for program needs in fiscal year 1997, fiscal year 1998 and future years. Do you believe that this proposal will set a precedent by the Administration as other PAYGO problems arise?

Answer. The Administration will have to address PAYGO problems as they arise and will always seek the best alternative to address them. We do not think this proposal will set a precedent as far as using the CRP enrollment activity for fiscal year 1997 made this an attractive alternative this year.

Question. How will it impact the funds required for CRP/WRP technical assistance in future years?

Answer. It should not impact future technical assistance needs for CRP/WRP in 1997 and 1998 since this will be funded through unobligated 1996 CRP funds. Technical assistance for the CRP and WRP are more directly affected by the 1996 Farm Bill which amended Section 11 of the CCC Act by limiting the total amount of CCC funds made available for non-program payments to the total amount spent in 1995.

Question. Is it not true that the enrollment for CRP is unpredictable because farmers are watching crop prices before they decide how much land to enroll?

Answer. The number of farmers that will bid in any CRP sign-up is unpredictable. Short-term and long-term consideration of prices is certainly a factor. A high price scenario that farmers project may only be temporary.

Question. What are the CRP enrollment projects in fiscal year 1998 and the out-years?

Answer. The fiscal year 1998 budget assumes the following enrollment projects for CRP:

	<i>Acre</i> s
1998	19,000,000
1999	8,500,000
2000	5,300,000
2001	758,000
2002	1,000,000

Question. What are the assumptions underlying these projections?

Answer. CRP enrollment is assumed to gradually increase to 36.4 million acres by 2002 which is the maximum enrollment level authorized for this program. With 21.4 million acres scheduled to expire on September 30, 1997, 4.8 million acres the following year and 3.4 million acres on September 30, 1999, it is not practical to expect full replacement of all expiring acres during fiscal year 1997. Therefore, at the time the budget estimates were completed, 19 million acres were projected as the maximum amount likely to be replaced in 1997 with the remaining expiring acres and additional acres needed to return to the 36.4 million acres occurring over several years.

Question. Please explain the PAYGO offset. How much would be saved by delaying the sign-up of 2 million acres of farmland in the Conservation Reserve Program from 1997 to 1998?

Answer. Legislation is required to authorize the use of royalties under this proposal. A critical factor in being able to exchange the royalties is compliance with the so called "PAYGO" requirements of the Budget Enforcement Act of 1990 which

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requires legislation to be budget neutral and to have no net impact on the Federal budget deficit. The Administration estimates that deferring two million acres from the current CRP sign-up for one year will save about \$103 million over five years.

Question. Would this be fiscal year 1998 savings?

Answer. These savings are projects over a five year period so a portion would come in 1998.

Question. Why would it not increase the amount needed to reach your CRP acreage target in fiscal year 1999?

Answer. The proposal only serves to postpone the sign-up of a small portion of the projected acreage, not to reduce the size of the program. The target of enrolling 28 million acres over the next two years will not change.

PLANT MATERIALS CENTERS

Question. Which of the 26 Plant Materials Centers have completed their research? How many products has each center produced and what are they?

Answer. None of the plant centers have completed their work. The work of developing and transferring new plant technology for NRCS Field Offices is an ongoing process which will continue to require new state-of-the-art information to adequately meet emerging resource challenges. The 1996 Farm Bill, for example, has a number of provisions and technology needs which can best be met by information from the plant materials program. Some of the technology needs are yet to be developed.

Centers organize their work load into separate projects that are comprised of individual studies addressing specific conservation needs. At the present time there are approximately 500 active studies receiving attention. As the objectives of individual studies are met, the study is terminated and new ones are initiated. Projects are undertaken to work on high priority needs, and a typical study takes 3–4 years from its inception, to implementation, to transfer of information at the current funding level.

Products from centers most commonly include: releases of new materials; printed information on where, how, and when to use plants; presentations to Field Office staff and land users; revisions of plant science information in NRCS's Field Office Technical Guides; and new/revised plant technical guides that evaluate critical land management approaches. Products like these number in the hundreds annually on a program-wide basis. On a per center basis, a "typical" number would be 20 or more. There is some year-to-year variation depending on the number of studies reaching completion.

Question. What products are currently in the pipeline?

Answer. The plant materials program is a diverse one with many projects underway. Specifically, the program is developing plant recommendations, technology, and products for: Farm Bill Programs such as the Conservation Reserve Program (CRP), Environmental Quality Incentives Program (EQIP), Wildlife Habitat Improvement Program (WHIP), and Wetlands Reserve Program (WRP); critical habitats like wetlands, riparian corridors, and disturbed areas; environmental concerns relating to native plants, noxious/invasive plants, threatened and endangered species; management practices including buffer strips, soil bioengineering, waste management; and, program outreach efforts on tribal issues and with limited resource farmers.

TECHNICAL ASSISTANCE

Question. In the fiscal year 1997 Committee report, the Department was urged to implement CRP and the Wetlands Reserve program (WRP) in their entirety, including technical assistance, through the Commodity Credit Corporation (CCC) as authorized in the 1996 FAIR Act. You indicated in your prepared testimony that the CCC reimbursement cap prevents this. Why does it, when Section 341 of the FAIR Act directs you to use CCC funds to "carry out" these programs?

Answer. Section 161 of the Federal Agriculture Improvement and Reform Act of 1996 (the 1996 Act) amended Section 11 of the Commodity Credit Corporation Charter Act to restrict the transfer of funds from CCC to any agency of the Federal government, any State, the District of Columbia, any territory or possession or any agencies thereof. Transfers may not exceed the amount that was transferred in fiscal year 1995. This restriction was effective October 1, 1996. Section 341 of the 1996 Act amended section 1241(a) of the Food Security Act of 1985 (the 1985 Act) to provide mandatory funding through the Commodity Credit Corporation to carry out Conservation Reserve Program, Wetlands Reserve Program and EQIP. While section 1241(a) authorizes use of CCC funds, section 161 restricts the amount of CCC funds that can be used by agencies to administer programs on behalf of CCC. The reference in section 1241 of the 1985 Act is similar to other statutes that authorize

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CCC to carryout specific functions. Similarly, the section 11 cap restricts the use of CCC funds under these other programs.

EQIP is exempt from the section 11 cap because section 1241(b) specifically provides that "Of the funds of the Commodity Credit Corporation, the Secretary shall make available \$130,000,000 for fiscal year 1996, and \$200,000,000 for each of fiscal years 1997 through 2002, for providing technical assistance, cost-share payment, incentive payments, and education under" EQIP. The specific language in subparagraph (b) provides authority to utilize CCC funds for EQIP technical and educational assistance in amounts greater than specified in section 11 of the CCC Charter Act.

ENVIRONMENTAL QUALITY INCENTIVES PROGRAM

Question. Many of the local conservation districts have written regarding the use of Conservation Operations technical assistance funds for technical assistance for the Environmental Quality Incentives Program (EQIP).

Have Conservation Operations Technical Assistance funds been used to provide technical assistance for EQIP? If so, why? What is the percentage of this money that has been used?

Answer. In fiscal year 1996, NRCS had to utilize some conservation operations technical assistance funds to implement EQIP or we would not be able to administer the program in all States. For 1997, NRCS has not yet used the \$20 million, or 10 percent, of CCC funds approved by the Office of Management and Budget for technical assistance. Discussions about the total funding for technical assistance provided from the CCC will continue with OMB as better information is developed. NRCS will continue to analyze its conservation technical assistance program in order to determine a more accurate estimate of how much is needed to operate EQIP, other farm bill programs, and the ongoing conservation assistance underway with Conservation Districts.

Question. What is the percentage of technical assistance from CCC needed to provide adequate technical assistance for EQIP? What about CRP?

Answer. NRCS estimates that at least 19 percent of EQIP funds are needed for use in 1997 in providing technical assistance for producers. The technical assistance needs will probably increase in subsequent years. Early analysis indicates it is possible that higher technical assistance needs may be required in future years because: EQIP contracts are 5 to 10 year contracts—there will be engineering, design, oversight, and follow-up activities by NRCS in each of the years of the contract; and, some of the EQIP contracts will have structural practices, such as animal waste facilities, waterways, terraces, etc., which will require significant time commitment from NRCS engineers and technicians for the design, building, and follow-up. However, some of the conservation technical assistance program funds will continue to subsidize the implementation of EQIP because the CCC Charter language does not permit CCC funds to be used for equipment and computers which are necessary to carryout the program.

NRCS and FSA have entered into an agreement concerning reimbursement for the costs of providing technical assistance for CRP that provides that NRCS will receive \$77 per bid offered for fiscal year 1997 and \$456 per bid accepted into the program, if the land is newly enrolled or requires a new conservation plan. In addition, NRCS is beginning to tract actual time spent working on CRP so that in future years reimbursement will be calculated based on actual time spent. For fiscal year 1997, the reimbursement for NRCS technical assistance for CRP will not be paid using CCC funds, but CRP unobligated balances from the appropriated account.

WETLANDS RESERVE PROGRAM TECHNICAL ASSISTANCE

Question. Under current law, reimbursement for NRCS technical assistance for WRP is limited to available funds under the section 11 cap. The FAIR ACT amended the Commodity Credit Corporation Charter Act, section 11, limiting the total amount of CCC funds made available for reimbursement to the 1995 level, effecting reimbursement agreements of all other Agencies competing for the limited funding source available. In addition to the section 11 cap, the FAIR Act prevents the use of reimbursable funds for purposes other than salary. CCC funds cannot be used for supplies, equipment, transportation expenses, etc., thus these funds will have to be absorbed through the Conservation Operations Account.

What is the estimated amount of funds needed for those purposes not covered by CCC funds?

Answer. The technical assistance funds needed for CCC conservation programs affected by the section 11 cap are as follows.

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<i>Program</i>	<i>Fiscal year 1998</i>
Wetland Reserve Program	\$18,200,000
Wildlife Habitat Incentives Program	7,500,000
Conservation Farm Option	3,750,000
Farmland Protection Program	720,000
Conservation Reserve Program	20,642,073
Total	50,812,073

These funds, however, should be available in fiscal year 1998 assuming sufficient levels of unobligated 1996 CRP and WRP funds which were appropriated and therefore not subject to the Section 11 cap.

Question. What unobligated funds will be used and what amount?

Answer. Unobligated WRP appropriations will be used to fund the \$18,200,000 needed for WRP. Unobligated CRP appropriations will be used to fund the \$20,642,073 needed for CRP and the \$7,500,000 needed for WHIP.

Question. Will appropriated funds be necessary? If so, how much?

Answer. For fiscal year 1998, the \$3,750,000 needed for CFO and the \$720,000 needed to fund FPP are proposed to come from the section 11 cap. However, since CCC funds cannot be used for personal property. NRCS will need to fund the purchase of such items from the conservation operations technical assistance account. Approximately 27 percent of the technical assistance costs normally are spent on personal property. Therefore, we expect that approximately \$200,000 would be needed to pay the cost of doing business in the implementation of CFO and FPP in fiscal year 1998.

WATERSHED AND FLOOD PREVENTION OPERATIONS

Question. How many new projects do you anticipate approving in fiscal year 1998?

Answer. We anticipate approving 7 new watersheds operation projects in fiscal year 1998.

In your statement Mr. Under Secretary, you state that the fiscal year 1998 budget request for Watershed and Flood Prevention Operations is \$40 million plus \$60 million in Conservation Operations for technical assistance.

Question. Why has NRCS moved technical assistance for water resources from the Watershed and Flood Prevention Operations?

Answer. Technical Assistance for water resources has been moved from the Watershed and Flood Prevention Operations to Conservation Operations in an attempt to consolidate all technical assistance activities except for the Resource Conservation and Development program under one appropriation account.

Question. How will this impact the activities currently funded under these functions?

Answer. This consolidation of technical assistance funds will not impact the activities currently funded under these functions. The \$60 million, which is approximately the current level, will be allocated to states to be used for implementation of Watershed and Flood Prevention Projects as is the current practice.

WATERSHED AND FLOOD PREVENTION LANGUAGE CHANGES

Question. The NRCS request has changes to the appropriations language. Please explain the rationale for each of the following: language that makes funds available to high-priority projects; deletes language for providing \$15 million under Public Law 534 authority; deletes language for the \$200,000 for employment under the Organic Act of 1944; and, language that allows up to \$15 million to be used to offer subsidized loans through the Rural Utilities Service or Rural Business Cooperative Service.

Answer. As a result of a \$881 million unfunded commitment and limited funding to reduce that amount, NRCS plans to give priority and fund those approved projects which have the highest net benefits. Projects will be evaluated regionally and priorities established. However, many projects have been waiting their turn for funding and commitments made in the past will have to be honored.

Deletion of the \$15 million under Public Law 78-534 represents a combining of the funds for Public Law 83-566 and Public Law 78-534 into a single line item which was proposed in the 1997 President's budget. These programs are very similar in purpose, scope and procedures. Combining of the fund allows us more flexibility to utilize the money where the greatest need exists regardless of the program.

In the past loan money was available to sponsors through the Farmer's Home Administration for loan under the Public Law 83-566 program. Because of high interest rates on the money, loans were rarely made over the past 10 years. During the past two years or so no money was provided to the Rural Development agencies for

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these loans. Under the 1998 proposal, this program has a more attractive interest rate because the funds would be used to buy down the interest rate that sponsors would have to pay for their loans. The use of \$15 million for subsidized loans through the Rural Utilities Service or Rural Business Cooperative Service is an attempt to revitalize the loan program, and allow sponsors the option of borrowing funds at a reduced rate to more quickly complete their projects.

Question. Will this loan from RUS or RBCS be used only for existing Small Watershed Projects?

Answer. The appropriation and funding allocation is for Public Law 83-566, therefore, the Public Law 566 funds for subsidized loans through RUS or RBCS could only be used for these small watershed projects.

FUNDING HIGH PRIORITY PUBLIC LAW 534 PROJECTS

Question. You suggest deleting language that provides for \$15 million under Public Law 534 and shifts the funding of high-priority projects under Public Law 566 authority. What would not be funded as a result of this shift in funding?

Answer. The funding for projects in Public Law 534 and Public Law 566 will largely not change as a result of this shift in funding. Deletion of the \$15 million under Public Law 78-534 represents a combining of the funds for Public Law 83-566 and Public Law 78-534 which was done in the 1997 appropriation language. These programs are very similar in purpose, scope and procedures. Combining of the fund allows us more flexibility to utilize the money where the greatest need exists regardless of the program.

NRCS SALARIES AND EXPENSES

Mr. Under Secretary, you state in your testimony that since December 1994 NRCS has been closing field offices and consolidating services, and reducing staffers at headquarters.

Question. Please give the levels of staffing from 1994 to present that have been cut at the field office level and the headquarters operations.

Answer. We will provide a table showing the percentage of staffing levels for NRCS locations.

NRCS STAFFING LEVELS (PERCENT)

	Fiscal year—		
	1997	1996	1994
National headquarters	13	3	4
Field offices	77	75	72
State offices	15	17	22
Other	5	5	2

¹ In fiscal year 1996 staff for NHQ was 392, down from 536 in fiscal year 1994, the fiscal year 1999 target is 258.

NRCS INSTITUTES

You also state that the establishment of 6 NRCS Institutes will occur so that science and technology can be focused on.

Question. What are these institutes and where are they located?

Answer. Two new Institutes, the Wildlife Habitat Management Institute and the Information Technology Institute, in addition to six original Institutes, have now been established. The eight Institutes, their mission, and their headquarters location will be provided.

EIGHT NRCS INSTITUTES

1. Soil Quality Institute—Ames, Iowa. Mission is to provide leadership in soil quality, build partnerships, and develop, acquire, and transfer soil quality information and technology.

2. Wetland Science Institute—Laurel, Maryland. Mission is to develop, adapt, and transfer science and technology to protect and restore wetlands.

3. Social Science Institute—Greensboro, North Carolina. Mission is to develop and transfer information, procedures, training, and guidance related to the social and economic aspects of human behavior.

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4. Natural Resources Inventory and Analysis Institute—Ames, Iowa. Mission is to improve NRCS's potential to assess status, condition, and trends of our Nation's natural and environmental resources.

5. Watershed Science Institute—Seattle, Washington. Mission is to incorporate ecological principles into natural resource conservation and accelerate development and transfer of watershed-based technology.

6. Grazing Lands Technology Institute—Fort Worth, Texas. Mission is to acquire, develop, coordinate and transfer economically and ecologically sound grazing lands technology.

7. Information Technology Institute—Fort Worth, Texas. Mission is to explore, develop, and transfer the science and technology of state-of-the-art automated processes and tools.

8. Wildlife Habitat Management Institute—Jackson, Mississippi. Mission is to cooperate with conservation partners in acquiring, developing, and transferring wildlife habitat restoration and management technology.

NRCS NATIONAL HEADQUARTERS STRUCTURE ADJUSTMENTS

Question. The Department approved on January 31, 1997, further adjustments to the NRCS National Headquarters structure. What were these further adjustments?

Answer. The goal of the NHQ reorganization was to realign and restructure the current NHQ organization based on our reorganization appraisals and the Blue Ribbon Report on National Resources Inventory and Performance Management. The goal was not to reduce staffing levels, but to ensure an optimum organization structure for the Agency. Every employee has a position at the same grade level and in the same local commuting area under the new structure. There are no changes to the Agency's budget as a result of the reorganization. We will provide highlights of the major functional changes for the record.

HIGHLIGHTED MAJOR FUNCTIONAL CHANGES

1. Establish a new Deputy Chief for Soil Survey and Resource Assessment. This new deputy is responsible for all programs and activities related to the collection of natural resource and soils data, the assessment of natural resource status, natural resources conditions and trends, policy analysis, and strategic planning.

2. Deputy Chief for Programs to better reflect the focus of the Deputy Area. It established a Department of Agriculture Program Outreach Division as a result of the transfer of the Secretary's Section 2501 program from the Farm Service Agency to NRCS. Also transferred to this division are the 1890 and Hispanic Association of Colleges and Universities programs from the Deputy Chief for Management. It established a Civil Rights Program Compliance Division to align Title 6 responsibilities with program operations.

3. Name change from Deputy Chief for Soil Science and Resources Assessment to Deputy Chief for Science and Technology to more adequately align the Deputy Chief with the science and technology consortium of divisions, institutes, and centers which the Deputy Chief supervises.

4. Name change from Deputy Chief for Management and Strategic Planning to Deputy Chief for Management due to the transfer of strategic planning functions to the new Deputy Area. As the result of the separation of Title 6 and 7 responsibilities, it established the Civil Rights Employment Division to provide leadership for Title 7. The old Information Resources Management Division is now called the Information Technology Division to reflect a refocus on technology, and the addition of the Chief Information Officer centralized leadership and decision-making relative to information technology agency-wide.

WORKLOAD SHIFTS RELATED TO FAIR ACT

You state that the President's request for Conservation Operations is increased from fiscal year 1997 because of uncontrollable costs from inflation and pay costs, the cost to relocate NRCS operations to the USDA Service Centers, and increased program responsibilities with the implementation of the conservation programs of the FAIR Act.

Question. What workload shifts did NRCS encounter as a result of the passage and implementation of the FAIR Act?

Answer. There are several steps that we have taken to manage the increases in workload from the new conservation programs and the possible shifts in workload relative to implementation of the 1996 Act, including new AMTA contracts. In allocating fiscal year 1997 funds for EQIP, a natural resource-based allocation formula was developed so the allocation of funds could be primarily based on conservation needs.

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The 15th sign-up for CRP has resulted in tremendous workload in certain areas of the country. We are managing this workload by detailing employees from surrounding areas to assist in completing the sign-up activities. On a Regional level, the Regional Conservationists are coordinating the need for detailees between States.

NRCS is attempting to manage the workload shifts resulting from implementation of the 1996 Act conservation programs without a precipitous shift in employees from any area of the country. We assume that there may be a gradual shift to certain high workload areas as programs are implemented.

RELOCATION COST REQUIREMENTS

Question. What are the fiscal year 1997 relocation cost requirements?

Answer. NRCS has not tracked the costs for USDA Service Center implementation agency-wide which have been funded within the annual funds available to the agency. However, the database on service centers will be enhanced to capture this information.

SMALL WATERSHED OPERATIONS

Question. What process is NRCS using to revisit all Public Law 566 plans to reduce the backlog of work? How many plans do you anticipate will be revised?

Answer. NRCS recently completed a "Backlog Review" where every active watershed project was examined by NRCS, local sponsors, and stakeholders. The intent of the review was to work out those projects and structural works of improvement which were economically or environmentally unsound. As a result of that review, 131 supplements were prepared deleting 1900 miles of channel work and 410 structures. Seventy nine projects were declared completed. About one third of the measures needing to be deleted remain in the plans. These will be deleted in fiscal year 1997 through an estimated 69 supplements to the original plans.

BACKLOG OF WATERSHED PROJECTS

Question. What is the number and dollar amount of project backlogs? How much is included in the fiscal year 1998 request to address this?

Answer. The backlog is presently estimated at \$881 million for Public Law 566. The fiscal year 1998 budget proposes \$40.0 million be used to reduce the backlog.

HIGH PRIORITY FLOOD PREVENTION PROJECTS

Question. The 1998 budget proposal provides no additional funds for flood prevention work under the authority of Public Law 534, but would continue work on the remaining high priority projects that qualify for funding under Public Law 566. Which high priority projects remain?

Answer. We have not developed a specific list of projects that would remain, however, all active Public Law 534 projects contain sub-basin with high priority projects. Priority will be determined by Congressional language, states priorities, funding availability, contribution to the NRCS Strategic Plan, and sponsor commitment.

INFORMATION SYSTEMS

On March 7, 1997, the Colorado Springs Gazette announced that the National Systems and Research Company had won a \$212 million, five-year contract to upgrade computer and communication systems for FSA and NRCS.

Question. Why was this contract awarded at this time? Did this not fall under the Department's moratorium on the new information system technology investments?

Answer. National Systems and Research Company is one of 6 vendors awarded a contract under a competitive procurement by the Farm Services Agency for a wide range of IRM support services.

The procurement resulted in the award of 6 indefinite delivery, indefinite quantity contracts to separate vendors. The 212 million dollars is the total amount of delegated procurement authority issued to the FSA contracting officer for contracts. Each of the 6 contracts has a minimum guarantee of \$5,000 per year, and a maximum amount of \$43,240,000 per year.

When appropriate and approved, specific task orders are to be competed among the 6 contractors. Task orders are subject to the constraints of the current Department moratorium. The contracts may be used for certain investments permitted by the moratorium, or by moratorium waivers. The contracts may not be used for investments prohibited by the moratorium. While it is in effect, the moratorium will constrain the use of these contracts.

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The contracts are expected to support maintenance of current NRCS and FSA computing systems, and the development, deployment, and support of new computing systems for service centers, administrative convergence, and other initiatives under the auspices of the departmentally coordinated technical architecture and approved agency information system plans.

CONSERVATION OPERATIONS

LANGUAGE TO LIMIT AGREEMENTS WITH DISTRICTS FOR TRAINING

Question. Under Conservation Operations, the fiscal year 1998 budget requests appropriations language to impose a funding limitation of up to \$5 million for agreements with conservation districts to support training in rangeland conservation. Why is this funding limitation requested?

Answer. This language provides funding limitation for agreements with conservation districts to support training in rangeland conservation.

EMERGENCY WATERSHED PROTECTION FUNDS

Mississippi has specific needs for funds in Mississippi that do not qualify for the EWP. These funds are needed to repair damages resulting from storms occurring in 1991 and 1993. The counties in Mississippi effected were Alcorn, Hinds, Claiborne, Madison, Rankin, Forrest, and Yazoo.

Question. Will funding from the fiscal year 1997 Emergency Supplemental be available for non-exigency needs?

Answer. These needs were not part of the President's Emergency Supplemental request.

Question. Does this request place any emphasis on any long term solution to the non-structural flood damages?

Answer. Long-term flood damage solutions are addressed under Watershed Operations and Flood Prevention Program (Public Law 566 and Public Law 534) planning and installation rather than under the Emergency Watershed Protection Program. However, the 1996 Farm Bill included flood plain easements as an eligible EWP measure. We will investigate non-structural easement opportunities in Mississippi.

EMERGENCY MEASURE FUNDING NEEDS IN MISSISSIPPI

Question. What are Mississippi's needs for any pending fiscal year 1997 EWP projects and what is the projected cost? What Mississippi needs are outstanding from past fiscal years and what is the estimated costs?

Answer. Mississippi pending fiscal year 1997 EWP current needs as a recent of the March tornado and rains are for a total cost of \$2.4 million. Outstanding requests for storm damage for 1991-94 are \$20 million dollars.

Question. If funding for the special projects are received, can you implement the projects in a timely manner?

Answer. The special projects for 1991-94 could be installed over a three-year period.

DEMONSTRATION EROSION CONTROL (DEC)

The Yazoo Basin Demonstration Erosion Control Project was established in 1984. It authorized the Natural Resources Conservation Service, U.S. Corps of Engineers and the Agricultural Research Service to work jointly on a program to demonstrate on a watershed system basis methods of reducing flooding, erosion, and sedimentation in 6 selected watershed of the foothills area in the Yazoo Basin. Today the DEC area has been increased to include 16 watersheds in the area. From fiscal year 1985 until fiscal year 1992, the NRCS received direct funding for this program.

Question. Was any Demonstration Erosion Control (DEC) funding available for the NRCS in fiscal year 1997?

Answer. The initial funding for the DEC program was received in fiscal year 1985 and the Congress earmarked \$4,100,000 for continuation of the joint NRCS-Corps of Engineers project begun in 1984 to alleviate flood and drainage problems in the Yazoo River Basin. The NRCS has received directed funding for the DEC watershed in the amounts of \$4.1 million in fiscal year 1985; \$5 million in fiscal year 1986; \$5.4 million in fiscal year 1987; \$5 million in fiscal year 1988; \$5 million in fiscal year 1989; \$7 million in fiscal year 1990; \$7 million in fiscal year 1991 and \$8 million in fiscal year 1992. No funding was provided for NRCS for the Demonstration Erosion Control (DEC) in fiscal year 1997.

Question. Has the NRCS acquired any money from the Corps of Engineers for DEC funding in fiscal year 1993 through fiscal year 1997? If not, why?

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Answer. The Corps of Engineers provided NRCS funding for the DEC project as follows: \$115,000 in fiscal year 1993; \$660,000 in fiscal year 1994; \$4,430,000 in fiscal year 1995; and \$1,785,000 in fiscal year 1996. No funding was provided by the Corps for NRCS funding of DEC in fiscal year 1997.

SHARKEY SERIES SOILS

The Committee is aware that a PEER-reviewed study has been conducted which indicates that a significant percentage of Sharkey Series Soils in Sharkey County, Mississippi, which have been previously considered "wet", have now been determined to possess characteristics as "non-hydric soil".

Question. I have been told that NRCS concurs with the findings of the Sharkey Soils Studies initiated by Dr. David Pettry, a soil scientist for Mississippi State University. Is this true?

Answer. Dr. Pettry and others published a bulletin in 1996 suggesting that the Sharkey soil as mapped in Mississippi was given an incorrect taxonomic classification of Inceptisols, and that the correct classification should be Vertisols. It was also suggested that the Sharkey soil had been incorrectly designated as a Hydric Soil and that that designation should be dropped.

At the time of the meeting with Dr. Pettry, the NRCS was aware of the problems with the taxonomic placement of Sharkey soil into the order of Inceptisols and was already in the process of reclassifying the soils into the order of Vertisols, so yes, NRCS was in agreement with Dr. Pettry on that issue.

The field study was to review the actual mapping of the soils designated as Sharkey and to review their designation as Hydric soils. This field study verified that there is a hydric component and a non-hydric component within the Sharkey series as mapped, and that the designation of Sharkey series as a Hydric soil in the list of "Hydric Soils of the United States" should remain. On this issue therefore NRCS differed with Dr. Pettry.

Question. Please provide an explanation of any existing or future implications which Dr. Pettry's findings might reflect upon wetlands regulations for purposes of Section 404 of the Clean Water Act, Swampbuster provisions, or any other field and on-site determinations carried out by USDA, the Corps of Engineers, or other federal agencies.

Answer. The implications of Dr. Pettry's findings on the taxonomic placement of Sharkey soils into the Vertisol order are mostly academic and important to soil scientists in having the proper concept of the formation of the soil and its location on the landscape for mapping purposes.

The implications of the designation of Sharkey soil as a Hydric soil do not change since that designation is to remain the same.

What this study does point out is the continuing need to update soil survey information as new uses and interpretations of that information develop. The Sharkey soils have been mapped in many areas and a soil survey published before there was such a designation as Hydric Soil. Had that been an important concept at the time Sharkey soil was being mapped in those areas, perhaps fewer inclusions of soils with better drainage or poorer drainage would have been included in the design of the mapping unit. However, this is not greatly significant for the purposes of the wetlands regulations of Section 404 of the Clean Water Act, Swampbuster provisions, or any other field and on-site determinations carried out by USDA and others because the designation of a wetland must be verified in the field. The Hydric soil designation is only one indicator that an area may qualify as a wetland.

The 1990 Farm Bill defined a 'wetland', except when such term is part of the term 'converted wetland', to mean land that "has a predominance of hydric soils; is inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions; and under normal circumstances does support a prevalence of such vegetation".

It is unlikely that any of the acres identified and delineated as jurisdictional wetlands on non-agricultural lands in the Mississippi Delta will not change as a result of this study.

WETLANDS RESERVE PROGRAM

Question. Please describe the current relationship with the private organization that was selected to support the implementation of the Wetlands Reserve Program.

Answer. On January 19, 1996 the NRCS and the National Fish and Wildlife Foundation entered into a cooperative agreement in furtherance of the WRP effort. Under that agreement the Foundation was to receive and match \$5,000,000 of WRP funds and help identify and establish ecologically sound and cost-effective ease-

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ments. On February 7, 1997 the agreement period was extended to August 30, 1997 to provide the Foundation with additional time in which to raise matching funds and complete easement efforts with the program funds that were provided under the original January 19, 1996 agreement.

PRIVATE DELIVERY OF FEDERAL CONSERVATION PROGRAMS

It is my understanding that the Department of Agriculture is considering contracting out certain delivery activities associated with one or all of the following federal conservation programs: the Wetlands Reserve Program (WRP), Conservation Reserve Program (CRP), or the Wildlife Habitat Incentives Program (WHIP). As I understand it, this contracting would be to non-profit and state conservation agencies in the name of "partnerships"

As I understand it, the reason this new delivery system is being developed is because of a lack of resources and staff to successfully carry these out.

I realize this Committee instituted a pilot program two years ago with the National Fish and Wildlife Foundation, a government-sponsored entity, to implement the Wetlands Reserve Program. Now this is being expanded to totally private organizations.

Question. The President's budget proposes the closure of significant numbers of Farm Service Agency field offices. How can you justify contracting out the delivery of federal programs at the same time we are closing these offices?

Answer. The partnerships that NRCS is striving to establish do not focus on type of administrative services that are available from the Farm Service Agency. We are seeking to work with those entities with unique special experience and proven ability in the implementation of projects of the same type in the same local areas as NRCS is now charged with implementing through the WRP. Entities that, based on their years of experience and similar wetlands and wildlife conservation mission, bring unique talents and independent resources to the WRP are the focus of the effort (e.g., Ducks Unlimited, The Nature Conservancy, Pheasants Forever, State Waterfowl Associations such as the Wisconsin Waterfowl Association and the California Waterfowl Association, and State Wildlife Agencies). Through this partnership approach we believe that NRCS will be able to learn from and work closely with those most skilled and knowledgeable and who are established in the local areas involved. We also believe that the project results achieved through such partnership efforts will achieve the greatest ecological benefits in the most cost efficient manner and of the most benefit to private landowner participants. The necessity of increases in agency personnel will also be moderated by this partnership effort.

Question. What protection is there to prevent these private organizations from assisting their big contributors in enrolling land in the government programs they are implementing?

Answer. WRP project recommendation is a direct function of the State driven ranking process that is in place in each State. The State Conservationist, with the advice of the State Technical Committee, develops the ranking criteria by which all applications are to be rated. The ecological merits of the restoration that could be expected to occur on the site is the dominant consideration. Cost factors associated with the site are the second major consideration. Determination of all ecological measures of the value of the site for restoration are under the ultimate control of the NRCS field representative who conducts the field review of the application. Cost factors are based on projected easement land values and engineering restoration considerations. These also are the responsibility of the local NRCS field representative and other NRCS specialists as may be needed (e.g. engineering and soils assistance). Development and administration of the prioritized ranking list is under the full control of the NRCS State Office.

Question. Under what authority would these partnerships be entered into?

Answer. Generally, the basic authorizing legislation for the Agency as amended by the 1985, 1990, and 1996 Farm Bills and other legislation provide the authority for NRCS to enter into partnership agreements. The Soil Conservation and Domestic Allotment Act of 1935 (the Soil Conservation Act), 16 U.S.C. 590a, provides authority for the Secretary to cooperate or enter into agreements with, or to furnish financial or other aid to, any agency, governmental or otherwise, or any person, subject to such conditions as he may deem necessary, for the purposes of this Act. The WRP final rule, promulgated under the authority of both the Wetlands Reserve Program statute (16 U.S.C. 3837 et seq.) and the Soil Conservation Act, states that the Department may enter into cooperative agreements with Federal or State agencies, conservation districts, and private conservation organizations to assist the Department with educational efforts, easement management and monitoring, and program implementation assistance. 7 CFR 146.2(f).

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THE CONSERVATION FARM OPTION PROGRAM (CFO)

Question. The regulations have not been promulgated for the Conservation Farm Option Program (CFO). When will the final regulations be published?

Answer. We expect to publish the final rule in the Federal Register by September 30, 1997.

Question. The President's request makes available \$2 million in fiscal year 1997 and \$15 million in fiscal year 1998 for the purposes of a CFO pilot program. In what areas is the pilot program being implemented? On what assumption does NRCS base the estimation of the number of contracts for fiscal year 1997 and 1998?

Answer. The information on specific pilot areas is not available at this time. Proposals for participation in the fiscal year 1997 program have not yet been received. However, an effort will be made to distribute the program funding geographically as well as among the producers of wheat, feed grains, cotton and rice.

The number of contracts are estimated using an average value of \$50,000 divided into the available funding for each fiscal year.

Question. How much do you estimate will be needed for each of fiscal years 1999–2002?

Answer. Funding for each of those fiscal years is authorized by the Federal Agriculture and Reform Act of 1996 as follows: fiscal year 1999, \$25 million; fiscal year 2000, \$37.5 million; fiscal year 2001, \$50 million and fiscal year 2002, \$62.5 million.

QUESTIONS SUBMITTED BY SENATOR BUMPERS

REIMBURSEMENT FOR NRCS TECHNICAL ASSISTANCE

Question. I understand the Department has taken the position that the 1996 Farm Bill has placed restrictions on section 11 transfers from CCC even for programs that were converted from appropriated to direct spending. I further understand that carryover funds from the CRP and WRP accounts may be available for the costs of technical assistance in fiscal year 1997 and perhaps fiscal year 1998.

To what extent will these carryover funds be available to meet the demands of providing technical assistance for NRCS and related programs in fiscal year 1998 and future years?

Answer. With respect to the WRP, the 1996 unobligated appropriated funds available of approximately \$31 million, are proposed to support the NRCS technical assistance needs for WRP in the fiscal year 1997 and fiscal year 1998 program sign-ups only. Of the \$31 million available, approximately \$12.327 million will be used for NRCS technical assistance supporting the 1997 WRP program sign-up to enroll 130,000 acres, and \$18.200 million in support of technical assistance for 1998 to enroll 212,000 acres. The full \$31 million requested for 1997 and 1998 are not available under the limited 1995 CCC spending level cap enacted under the Federal Agriculture Improvement and Reform Act of 1996. A similar situation exists for the CRP where about \$111 million in 1996 unobligated appropriated funds will be available for technical assistance in fiscal years 1997 and 1998.

Question. What plans do you have in the event these funds are exhausted?

Answer. I would hope some joint effort between the Administration and Congress could be reached to resolve this matter in the future, and provide needed technical assistance funding in support of the WRP, and other conservation programs now limited under the CCC section 11 cap. The technical assistance funding level needs of the WRP presently are not sustainable under the Conservation Operations account at the current funding level without reducing conservation work being conducted out of NRCS field offices. Technical assistance for the implementation of conservation practices, in support of the vast conservation issues facing this nation, are vital to the health of our nations lands. I would hope resolve on this important key issue is reached in the near future.

Question. How would the implementation of conservation programs (mandatory and discretionary) be affected if this subcommittee would limit funding for technical assistance to a baseline equal to previous year discretionary spending for technical assistance?

Answer. The fiscal year 1998 Presidents budget proposes an increase of \$20,349,000 for the NRCS Conservation Technical Assistance account, to support partial pay increases for 90 FTE's who will provide technical assistance to approximately 9,000 farmers and ranchers who own approximately 700,000 acres of land, developing soil survey data, and enhancing the infrastructure of the base program to broaden skills for delivery of the 1996 Farm Bill programs.

The NRCS technical staff are the cornerstone for the implementation of the conservation programs, who develop the critical conservation plans so needed for pro-

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gram delivery. In our efforts to reorganize the agency, great efforts were made to sustain this critical work force, comprised of natural resource science expertise and capable of utilizing developments in new scientific technologies in the area of natural resource sciences for the implementation of conservation programs.

Setting a limit on technical assistance funding in fiscal year 1998 would effect NRCS training for rangelands and improvements of conservation skills. NRCS technical assistance is utilized under a voluntary partnership with landowners, and is the primary vehicle through which needed improvements in the management, and establishing the condition of private grazing land is achieved.

A limit would also inhibit growth towards enhancements of the conservation districts skills which are needed to carry out the delivery of the 1996 Farm Bill programs, through cooperative agreements with professionals trained in the management of pasture lands, grazing lands, forests, and rangelands to assist in local program delivery.

A limit would also effect Soil Survey data developed through Geographic Information Systems. This natural resource science technology is vital to the implementation of the 1996 Farm Bill programs. Soil survey data is an important component of program delivery, used by all resources to make critical land use decisions that range from taxation and development to farming and natural resource protection under a voluntary approach with landowners. GIS provide orthophotographic maps of reference points needed to make decisions on soils, farm field boundary's, rivers, roads, for the land users. This technology is a vital tool for Service Centers in addressing local landowner concerns.

CCC programs for fiscal year 1998 will also require an increased workload from the NRCS technical staff responding to enacted legislation for CRP, WRP EQIP, WHIP, CFO, and FPP. Technical assistance funding for these programs other than WHIP, which is funded from CRP, are all subject to CCC and its restrictions. After exhausting all available funds to support technical assistance needs, NRCS would still be faced with critical funding choices and the operation of the agency in regards to program delivery of the new programs. The impact of a change to this effect would be far reaching.

TECHNICAL ASSISTANCE FOR EQIP

Question. I understand that you will provide an amount for technical assistance equal to 10 percent of full EQIP funding to carry out these program.

How do you justify that amount?

Answer. The 1997 apportionment provided by the Office of Management and Budget authorized 10 percent of EQIP funds for technical assistance. Initial workload estimates for EQIP were based on data gathered for a 1995 evaluation of the conservation technical assistance program. This data indicates that actual costs to operate EQIP could be higher than the 10 percent now apportioned. NRCS realizes that additional data is needed by OMB and have therefore begun a process to develop a new work measurement and program accountability system. We hope that these improvements will provide a better justification for future technical assistance needs relating to EQIP, other farm bill related programs, and ongoing conservation assistance with Conservation Districts.

Question. Is it not true that historically a larger percentage of funding was required for technical assistance related to these programs?

Answer. Yes. In researching the level of technical assistance required to implement EQIP, we completed an analysis of the technical assistance provided in 1995 to the four programs which have been replaced by EQIP. The analysis indicates that in 1995 the technical assistance provided was 767 FTE's—or about \$41.5 million—or 31 percent of the appropriated funds for ACP, CRSC, WQIP, and GPCP.

Question. What will be the effect on implementing these programs if discretionary spending for technical assistance is not made available for EQIP?

Answer. The impact of not receiving sufficient funds to provide technical assistance for EQIP are numerous. Field offices will have major delays in getting plans and engineering designs prepared for producers. In addition, programs that have been historically delivered through the Conservation partnership—that is conservation districts, state conservation agencies, and NRCS—will be disrupted.

The presence of Federal technical assistance leveraged over \$734 million dollars in state and local financial and technical assistance in 1996. This is about six times the 1995 NRCS field office base program expenditures. Another \$37 million was leveraged through assistance in implementing EPA's 319 program grants directed at reducing nonpoint source pollution from agriculture. Without the NRCS technical presence in the base program, other agencies would not be able to ensure that their cost sharing programs are technically sound and professionally accountable. Diver-

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sion of staff from activities supporting local and state initiatives will result in reduced capacity to implement state cost-share programs. The unintended consequence may be that the new Federal programs could substitute for, rather than augment, state and local initiatives.

Diverting staff from the base program reduces support critical to natural resources inventories and assessments which are used in the National Conservation Program, strategic planning, and budget formulation and accountability.

As part of the locally-led conservation effort, NRCS assists districts in helping individuals and communities with a broad range of natural resource issues including urban conservation, wellhead protection, irrigation management, and wildlife habitat improvement. Some of these locally-based concerns will not be addressed if funds are shifted away from support of the base conservation program. NRCS will providing technical assistance to nearly 200 state and local programs. A reduction in NRCS resources seriously impacts the success of the local and state cost sharing programs.

Many socially disadvantaged farmers and ranchers do not participate in cost-sharing or Federal loan or commodity program. The base program meets a critical outreach need by assisting limited resource farmers with solving their natural resource problems. Servicing this group requires substantially more time and effort than servicing NRCS's traditional customers. Reducing staff time allocated to base activities may disproportionately weaken service provided to limited resource farmers and ranchers.

The base program provides a network of well trained and technically competent conservationists located in most counties who are able to respond to emergencies. Recent examples of disaster assistance include the 1993 Midwest flood, flooding in California and the Northwest, and hurricane Hugo. The base program provides the foundation for the agency's rapid and efficient response to emergencies. The Emergency Conservation Program treated 927,000 acres in 1994, 874,000 acres in 1995, and 1,354,000 acres in 1996. The Emergency Watershed Program obligated \$123 million in 1994, \$134 million in 1995, and \$139 million in 1996 to protect flood damaged natural resources. Much of the Emergency Watershed work protects streambanks from erosion and restores hydraulic conditions to pre-disaster conditions.

Development of conservation planning standards, technical guidance, soil surveys, and natural resource information is a fundamental function of the base program. This information is the foundation for implementing EQIP, as well as the other Federal, state, and local cost-sharing programs. As staffing is directed away from the base program, the science-based credibility of the agency will erode and application of conservation technology will vary from county to county since national technical standards will not be available.

ORTHOGRAPHY

Question. Could you please provide an update on the progress of NRCS's Orthophotography activities and the agency's relationship with the GIS Center for Advanced Spatial Technology in Arkansas?

Answer. The NRCS, Farm Service Agency and the US Geological Survey continue to cost share and partner with state and federal agencies in the development of digital orthophotography base maps. At this time, approximately 21 percent of the conterminous US is complete, and another 27 percent is in-work. This is an overall increase of 15 percent in one year. In Arkansas, the NRCS, Farm Service Agency and the USGS are cost sharing in the development of digital orthophotography for seven counties in fiscal year 1997.

The interest in using digital orthophotography as a base map is increasing as the use of Geographic Information Systems (GIS) becomes more widespread. Digital orthophotography provides a rich source of information for a GIS. The images are accurate, current and contain more information than traditional data input such as line maps. With the advent of Pentium chips and increased disk storage for computers, digital imagery is now easily accessible. The NRCS has increased the use of digital orthophotography for soil mapping, soil digitizing, and as the base map for all natural resource information collected and analyzed for decision making at the Field Service Centers.

The NRCS has an excellent relationship with the GIS Center for Advanced Spatial Technology (CAST) in Arkansas. The NRCS State GIS Specialist for Arkansas is headquartered at the CAST facility. The NRCS GIS Specialist utilizes the GIS technology and staff expertise provided by CAST to help NRCS implement GIS at the county Field Service Centers. CAST provides 1/4 technical and administrative support to the NRCS GIS Specialist.

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Through a cooperative agreement with NRCS, the CAST also provides NRCS professionals with training in GIS, remote sensing and Global Positioning Systems (GPS). The NRCS provides direct funding to help carry out this cooperative agreement. The CAST has developed GIS software to allow NRCS to more easily input a variety of digital data into our GIS for NRCS activities. The CAST is working with the Washington County NRCS and Farm Service Agency (FSA), and the County Assessor's office on a GIS project to reduce the time NRCS and FSA is required to collect information about the location of a farm when a landowner applies for USDA farm program assistance. When this project is complete, the farmer could point on the digital orthophoto map showing the location of his farm, and another database will provide land ownership information about the property. The automatic linkage to county records will reduce errors in manually filling out forms and provide the information almost instantly. The CAST is using GIS and remote sensing analysis tools to provide NRCS field service centers with land use/land cover maps for our use in working with the Fish and Wildlife Service in improving wildlife habitats.

EAST AND CENTRAL ARKANSAS WATER RESOURCES

Question. Could you please provide an update on agency activities in respect to the East Arkansas ground water study and the Bayou Meto, Boeuf/Tensas, and Kuhn Bayou (Point Remove) projects?

Answer. Efforts have continued with the implementation of on-farm water conservation measures in critical ground water decline areas. This is a 26-county area experiencing critical ground water decline and saltwater intrusion problems. In 1997, 338 irrigation system plans were developed, 260,000 feet of pipeline installed, 13,880 acres of land leveled, 15,900 acres of tail water recovery systems installed, and extensive monitoring and water quality samples taken.

Work has continued on the Bayou Meto, Boeuf/Tensas and Kuhn Bayou projects in 1997 which was the third year of this effort at the direction of Congress.

Specifically in Bayou Meto, the inventory work for the on-farm part of the work is now complete and the report is being reviewed by the sponsoring local organization. Public meetings to inform the public of the results of these studies and the establishment of a hydrology data base will be carried out during the remainder of this year. The Corps of Engineers has been authorized to plan a flood control/irrigation project in this area and NRCS will play a major role in that effort with funding anticipated from the COE.

Boeuf/Tensas local sponsors continue to inform the public of the water decline and water quality status. They are in the process of organizing an irrigation district. NRCS is working on developing GIS data for use in the study. Work is about 50 percent complete on this project.

Kuhn Bayou is part of the Eastern Arkansas project and NRCS is performing some of the survey and design functions for this project. A natural resources conservation plan has been developed. The sponsors are seeking funding sources for implementation.

The fiscal year 1998 budget request contains funds which could be used for these projects.

COOPERATION WITH CORPS OF ENGINEERS IN THE DELTA

Question. Would you provide your views on the willingness of USDA to work cooperatively with the Corps of Engineers and state, local, and private sources toward long-term solutions to water resource problems in the state, especially in the Delta?

Answer. NRCS has been partnering with the COE in this area on these projects since 1987. Also involved is the Arkansas Conservation Agency. All three parties are dedicated to this effort and must participate for it to be successful. NRCS is anxious for this partnership to continue so as to help the landowners in this region solve their problems.

QUESTIONS SUBMITTED BY SENATOR KOHL

WETLANDS RESERVE PROGRAM

In the 1996 farm bill, the Wetland Reserve Program (WRP) was reauthorized, with changes in the program that required new enrollments to be divided between 3 categories. One-third of the acres enrolled are to be for permanent easements, one-third for 30-year easements, and one-third for 10-year contracts. However, subsequent to the WRP reauthorization, the Conservation Reserve Program (CRP) has been modified to allow cropped or prior-converted wetlands to be enrolled in that program.

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Question. Has the fact that cropped and converted wetlands are now permitted to be enrolled in the CRP affected interest in the WRP ten-year contracts? If so, would you recommend any change in the WRP structure to avoid future duplication between the two programs?

Answer. Landowner interest in the restoration cost-share agreement component of the WRP is very low. While the CRP enrollment of wetlands may have a bearing on this situation, it is not clear if this is a major factor or just one of many related factors. We believe these programs compliment each other rather than duplicate efforts by allowing landowners more options for the conservation of wetlands.

Question. Your testimony regarding the Wetland Reserve Program (WRP) suggests that you are getting more demand for the permanent easement enrollments than for the other types of enrollments (30-year easements or 10-year contracts). Given this demand for the permanent easements, do you believe that the program should be modified to better reflect the demand?

Answer. Our demand for permanent easements is very heavy. The demand for 30-year easements is moderate and the demand for restoration cost share agreements is very light. We are attempting to enroll the 130,000 acres in fiscal year 1997 in the one-third permanent, one-third 30-year easement, and one-third restoration cost-share agreement as provided for in the 1996 FAIRA Act. It is obvious that, based on landowner interest, we are badly under funding permanent easements, are pretty much on target on 30-year easements, and are placing far too much emphasis on restoration cost-share agreements. To achieve the most cost effective and ecologically sound restoration results, it would be more practicable if the ratio were 45 percent permanent easement, 40 percent 30-year easement, and 15 percent restoration cost-share agreement. Even though the restoration cost-share agreements are in less demand than easements we do fully support having this as one of our WRP options.

Question. In the Fiscal Year 1997 Agriculture Appropriations Act, language was included to allow for the 130,000-acre enrollment cap for the Wetland Reserve Program to be exceeded if non-federal cost share funds were secured to pay for these additional enrollments. Can you tell me whether this provision has been helpful to the WRP implementation in fiscal year 1997? Do you have an estimate of how many additional acres will have been enrolled in fiscal year 1997 as a result of this provision? Would you recommend that the subcommittee continue to include this provision in fiscal year 1998? Are there other such modifications that you would find helpful in fiscal year 1998 in implementing the WRP?

Answer. The opportunity to work with partners, receive non-Federal contributions, and apply these contributions to acres above the 130,000 fiscal year 1997 acreage cap has been very helpful.

With the \$8,089,700 of non-Federal contributions, we will ultimately be able to enroll approximately 9,000 acres of additional easements. Because these funds were largely associated with permanent and 30-year easements we are able to apply them back to these types in the same proportion as they were received.

We would definitely appreciate having this option continued in fiscal year 1998. Perhaps of equal value to the actual funds that are being received and the additional acres that are being enrolled is the fact that this provision has attracted a lot of partner attention. With their funding participation comes very beneficial expert assistance in the many and varied aspects of wetland restoration. This partnership relationship is making the on-the-ground results of even greater value to the involved landowners and the national wetland conservation purpose as well.

It would be beneficial to the WRP and would allow us to be more responsive to the tremendous level of landowner interest if the acres that are enrolled in response to the level of non-Federal contribution could be considered outside of the fiscal year 1998 acreage cap and the overall program cap as well. An indication from the Congress that the relative proportion of acres in each of the three categories of WRP land should more nearly match the level of landowner interest in each category would also be very helpful. In order to assist us in our efforts to work with the many non-governmental conservation partners and to enable us to enlist their support in the WRP effort, the specific provision of authority for the use of CCC funds in conjunction with such partnership agreements is needed.

QUESTIONS SUBMITTED BY SENATOR LEAHY

ALLOCATION OF EQUIP FUNDS

Question. Last week NRCS allocated a majority of the fiscal year 1997 funds for financial assistance. Even though 50 percent of these funds are intended for assist-

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ance to livestock operations, my state, which is almost 90 percent livestock, received less than the two-year average NRCS used as a base. How do the criteria in the formula used by NRCS to allocate the EQIP funds account for livestock and what weight do these criteria have on the overall formula?

Answer. We will provide a table sets forth each of the 26 elements that we used in the 1997 allocation formula, it also shows the weight that was assigned to each factor and whether the factor is considered to affect livestock. This formula is used to determine the basic percentage of the EQIP funds that each state should receive. As you can see in the weights assigned to each of the factors, that the livestock factors are assigned 50.2 percent of the total weight.

The basic amount determined by the formula was adjusted so that no state would receive a dramatic increase or decrease in conservation assistance funds which might negatively impact their ability to manage or deliver the program. A historical funding level was used to limit major shifts. The average amount received in a state for fiscal year 1994 and 1995 for the ACP, WQIP, GPCP, and CRSCP was used to establish the historical level.

ELEMENTS OF ALLOCATIONS FORMULA

Element	Measurement	Source	Total weight (percent)—	
			Livestock	Nonlivestock
Cropland	Acres	NRI .....	.....	5.9
Cropland eroding above T	Acres	NRI .....	.....	6.4
Irrigated cropland	Acres	NRI .....	.....	4.4
Land in specialty crops	Acres	NRI .....	.....	3.2
Grazing and (non-Federal)	Acres	NRI	3.3	.....
Grazing land (Federal)	Acres	Census	0.7	.....
Rangeland in fair and poor condition	Acres	NRI	4.2	.....
Pastureland needing treatment	Acres	NRI	4.2	.....
Forestland	Acres	NRI .....	.....	2.2
Forestland eroding above T	Acres	NRI .....	.....	3.6
Wetlands	Acres	NRI	2.9	2.9
Riparian areas	Acres	NRI	2.15	2.15
Coastal zone land	Acres	NOAA	1.75	1.75
Land subject to flooding	Acres	NRI .....	.....	2.4
Ground water vulnerability (nutrients and pesticides)	Index	USDA	2.6	2.6
Land with saline and alkaline soil problems	Acres	NRI .....	.....	2.7
Impaired rivers and streams	Miles	EPA	2.4	2.4
Water bodies	Acres	NRI	1.3	1.3
Other land on farms/ranches	Acres	NRI .....	.....	2.5
Livestock	Animal units	Census	3.3	.....
Animal waste	Tons	Census	5.2	.....
Animal waste management system capital cost	Average capital cost	EPA	6.4	.....
Animal waste disposal	Animal units/cropland acres	Census and NRI	6.4	.....
Farms and ranches	Number	Census	1.95	1.95
Indian tribal land	Acres	BIA	0.8	0.8
Limited resource producers	Number	Census	0.75	0.75
Total .....	.....	.....	50.2	49.8

PRIORITY DISTRIBUTION OF EQIP FUNDS

Question. In allocating EQIP funds, NRCS placed a priority in the first year on capitalizing on the experience of those States that had a successful relationship with the State agriculture program, a solid reputation for assisting farmers to improve their conservation practices and a commitment by the State to contribute to the cost-share program. I'm certain that lake Champlain and Memphremagog must have ranked high under these criteria and I know you're familiar with the commitment of farmers in these watersheds and the capability of the NRCS staff in Vermont. But, I would imagine that many of the States receiving large increases in the fiscal year 97 allocation may not be able to use all of their allocation. Would you agree that when that occurs, funds should be redistributed to States that have the previously mentioned attributes? Would you also agree that States that can show

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a considerable interest, even a list of farmers who want to participate in EQIP should receive a higher allocation of those remaining funds?

Answer. Yes, we intend to monitor the obligation of funds in each State throughout the summer and will redistribute funds to ensure that all 1997 EQIP funds are obligated before the end of the fiscal year. States that can show that they have producers ready to enroll will be able to receive additional allocations to the extent that funds are available.

LIMITATION ON PERCENTAGE INCREASE IN EQIP BY STATE

Question. Finally, when you allocated this year's funds, you placed a 30 percent cap on the increase any one State could receive over the previous year. I can understand why that cap would be placed on States receiving a large allocation because it may dramatically increase the workload. But I would think that this cap is not necessary for smaller States because even 50 percent increase would be very manageable. Is the cap necessary for small States and does NRCS believe it could be a negative incentive for programs to expand as much as possible in the next year?

Answer. We believe that the 30 percent cap is necessary in large, as well as small States. Small States may actually have more difficulty handling a rapid increase in funds than a larger State because a small State does not have the depth of resources in all specialized technical fields that are needed to implement a program such as EQIP. Large States usually have on staff more than one employee with technical expertise, such as engineer, biologist, or economist. In smaller States, often employees with specialized expertise are shared with another State. Large increases in workload, without more than one employee to complete the task could result in a State having difficulty in managing the program. We will be evaluating the implementation of the program in all States during 1997 and will use the feedback we receive from both large and small States to evaluate whether the cap was set at an appropriate level and whether the cap was appropriate for both large and small States.

INCREASED SCOPE OF CRP, WRP, AND EQIP

Question. As CRP, WRP, and EQIP expand their scope, there will be an increased demand for technical assistance from NRCS. Assuming the Department does not increase staff to meet this demand, has the Department considered developing partnerships with non-profit organizations that can offer similar or complementary services, such as the Sustainable Agriculture Research and Education or the Appropriate Technology Transfer for Rural Areas programs?

Answer. The Department is evaluating all legal opportunities to expand our partnerships to improve the implementation of conservation programs in the field. One of the opportunities that we have been researching is to increase partnerships with non-profit groups so that program participants can benefit from the specialized expertise that may be available within a non-profit group.

CONSERVATION FARM OPTION

Question. During the drafting of the Farm bill, we all recognized the need to insure that the various conservation programs are complementary and can be used by farmers as a "toolbox" of conservation assistance. The Conservation Farm Option was intended to help meet this goal. I see in your fiscal year 98 request that you are going to begin implementation of the program in pilot areas. What type of areas are you looking for to launch these program pilots?

Answer. Areas where there are diversified and well manifested and documented natural resource problems would be suitable pilot areas. Such areas that have a high number of eligible producers that are willing to participate in the CFO program would be high priority areas. This would provide the opportunity to plan and implement a variety of innovative practices, combine several of our traditional programs and have high probability of achieving measurable results. However, an effort will be made to distribute the program funding geographically as well as among the producers of wheat, feed grains, cotton and rice.

AMERICAN HERITAGE RIVERS INITIATIVE

Question. When the President announced the American Heritage Rivers initiative it was stated that some of the funding would come through NRCS conservation programs. What is the NRCS involvement in developing the guidelines for this initiative? How does NRCS plan to re-focus its programs for the rivers that are designated?

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Answer. NRCS has a representative and alternate on the working group developing guidelines for the American Heritage Rivers initiative. The mechanism has not been established for focusing federal services on designated rivers.

FARMLAND PROTECTION PROGRAM

Question. The Farmland Protection Program, and its predecessor Farms for the Future, has been highly successful in Vermont. How many farms have the program helped purchase easements on? How many did the new program assist with fiscal year 1997 funds? What is the estimated need for this program?

Answer. When easement acquisitions are completed, the Farmland Protection Program will acquire contingent remainder rights on approximately 203 farms. For fiscal year 1997, \$2 million was approved by the Congress. We are currently in the process of making recommendations to the Secretary of Agriculture to implement the program for this year. We will find out how many that the program may assist in 1997 when allocation of funds is completed. The need of Federal funds for this program in the immediate future is estimated at \$460 million based on the current pending offers that the State and local government entities have.

WETLANDS RESERVE PROGRAM TECHNICAL ASSISTANCE

Question. In 1998, the Wetlands Reserve Program estimated to have a program increase of \$44,885,000. Assuming a resulting increased demand for technical assistance that NRCS is now unable to address through program funds, how will NRCS meet this increased demand over the long-term? What is the projected need for this assistance over the next five years? How does this technical assistance lower the cost to the farmer in enrolling land in the WRP?

Answer. The NRCS has no access to Commodity Credit Corporation funds (CCC) for agency WRP technical assistance funding needs in fiscal years 1997 or 1998. Consequently, the WRP technical assistance need for fiscal years 1997 and 1998 will be covered through the use of 1996 prior year appropriated unobligated WRP funds that were initially scheduled to be utilized in the purchase of 1996 WRP easements. Approximately \$31,000,000 of such prior year funds will be utilized. To enable us to honor and complete these 1996 easement commitments we will in turn utilize Commodity Credit Corporation Funds of approximately \$31 million. Only through this switching of funds was the agency able to find a way to fund technical assistance needs for fiscal years 1997 and the projected technical assistance need associated with the Administration's 1998 budget request. In the longer term, it will be necessary for NRCS to be able to utilize CCC funds to cover WRP technical assistance needs, since prior year appropriated WRP funds will not be available in fiscal year 1999 and beyond.

Excluding fiscal years 1997 and 1998, since prior year WRP appropriated funds are available for technical assistance needs for these years, the WRP technical assistance funding need through fiscal year 2002 will be approximately \$38,188,000.

Technical assistance funding is required if the agency is to provide landowner's who wish to enroll in the WRP with that opportunity. Such funding also provides landowners with assistance in achieving the most cost effective restoration results, thus lowering the cost of the restoration effort by minimizing the likelihood that restoration actions will fail and need to be subsequently reinstalled. The assistance also enables landowners to receive help in monitoring their restoration results and the terms and conditions of their easement commitments so as to achieve the optimum wetland restoration and protection benefits from the WRP.

WATERSHED SCIENCES INSTITUTE

Question. I am pleased that Vermont is a part of the NRCS Watershed Sciences Institute. What is the current status of the Institute and what future activities are planned?

Answer. The Watershed Sciences Institute is one of eight functioning National Institutes in NRCS. Its mission is "To incorporate ecological principles into natural resource conservation and accelerate the development and transfer of appropriate technology in response to comprehensive watershed needs and environmental sustainability at the watershed and landscape scales." The Institute is acquiring and developing technologies such as those associated with resource management and planning on a watershed scale; functional restoration of streams and associated riparian areas; evaluation and management of agricultural nonpoint source runoff and waterborne pollutants; and agricultural sustainability.

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SUBCOMMITTEE RECESS

Senator COCHRAN. Our next hearing will be on Tuesday, April 8, at 10 a.m., in room 124 of the Dirksen Senate Office Building. At that time, we will review the budget request for the Department's farm and foreign agricultural services.

The subcommittee stands in recess.

[Whereupon, at 11:20 a.m., Tuesday, March 18, the subcommittee was recessed, to reconvene at 10:10 a.m., April 8.]

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AGRICULTURE, RURAL DEVELOPMENT, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1998

TUESDAY, APRIL 8, 1997

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:10 a.m., in room SD-124, Dirksen Senate Office Building, Hon. Thad Cochran (chairman) presiding.
Present: Senators Cochran, Burns, Bumpers, and Kohl.

DEPARTMENT OF AGRICULTURE

**STATEMENT OF DALLAS R. SMITH, ACTING UNDER SECRETARY, FARM
AND FOREIGN AGRICULTURAL SERVICES**

ACCOMPANIED BY:

**CHRISTOPHER E. GOLDTHWAIT, GENERAL SALES MANAGER
DENNIS KAPLAN, DEPUTY DIRECTOR, OFFICE OF BUDGET AND
PROGRAM ANALYSIS, DEPARTMENT OF AGRICULTURE**

FARM SERVICE AGENCY

STATEMENT OF BRUCE R. WEBER, ACTING ADMINISTRATOR

FOREIGN AGRICULTURAL SERVICE

STATEMENT OF AUGUST SCHUMACHER, ADMINISTRATOR

RISK MANAGEMENT AGENCY

STATEMENT OF KENNETH D. ACKERMAN, ADMINISTRATOR

OPENING REMARKS

Senator COCHRAN. The subcommittee will please come to order.

This morning we continue our hearings, reviewing the President's budget request for fiscal year 1998, as it relates to agriculture, rural development, and related agencies. This morning we will specifically review the budget request of the Farm Service Agency, the Foreign Agricultural Service, and the Risk Management Agency.

Our witness list this morning includes Dallas Smith, who is Acting Under Secretary for Farm and Foreign Agricultural Services; Bruce Weber, Acting Administrator for the Farm Service Agency; August Schumacher, Administrator for the Foreign Agricultural Service; Christopher Goldthwait, General Sales Manager; Kenneth Ackerman, Administrator for the Risk Management Agency; and

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Dennis Kaplan, with the Department's Office of Budget and Program Analysis.

We have received your written statements, which we appreciate very much. We will make them all a part of the record in full, and we encourage you to proceed to summarize those statements, if you like, and make whatever comments you think would be helpful to our understanding of this budget request. We will then have an opportunity to discuss your comments and ask questions.

PREPARED STATEMENT

We have a prepared statement from Senator Bumpers, and it will be made part of the record.

[The statement follows:]

PREPARED STATEMENT OF SENATOR BUMPERS

Mr. Chairman: Thank you and welcome to all our guests today.

To the average American, the term "Department of Agriculture" is likely to suggest images of farmers tilling the soil and moving their products to feed a hungry world. We all know that the Department of Agriculture is much more than that simple pastoral symbol. The Department of Agriculture of today includes a vast research capability, marketing and inspection, food safety, conservation, rural development, food and nutrition assistance, and much, much more. But of all the panels that will appear before this subcommittee, none better than this represents the traditional, perhaps stereotypical, client of the Department of Agriculture, the American farmer.

Although the goal of the American farmer at the time the Department of Agriculture was created has little changed, the means by which he meets that goal today would not even be recognizable to the farmer of the 1860's. The farmer of 130 years ago had much of a continent yet to settle in which new fertile lands reached to the horizon and natural resources seemed ever abundant. With the closing of the frontier came a realization that we needed to better manage our finite resources and a role of government was created to help the farmer accomplish his task. From region to region, farming practices and structure might vary, but a constant champion and protector of the farmer has been the USDA.

Nuances to that farmer/government relationship are ever changing and last year has witnessed some of the greatest changes in a generation. I fear that too many of us have lost the memory of farm economies gone awry, leaving the nation in a wrenching depression. I fear for the worst and hope for the best.

Our national economy is strongly founded on the principle of free enterprise. So it may seem strange to some that for so long agriculture, the mainstay of the American economy, was tied to a system of production controls and price supports. The American farmer is a small individual producer playing to a global market. He represents one of the very few, perhaps the only, member of our economy who buys his inputs retail and sells his products wholesale. The farmer is virtually unable to pass any of his costs on to anyone else and his livelihood, sometimes his very life, is often held in the balance by the forces of nature. If we feel that abundant food is an important resource of our society, and I believe we do, then it is understandable that society has a stake in the well-being of the American farmer.

Today we will hear from the agencies responsible for delivery of government services to the farmer on the farm and in the development and maintenance of foreign markets. With the changes of the past few years, exports opportunities are more important than ever. With the changes of last year, new challenges face the farmers in the countryside and the changing face of USDA is yet to finish this transformation. Risk management may become the new by-word for our new farmer/government relationship. Certainly, with the loss of programs farmers have relied on for a generation, much is at risk.

UNDER SECRETARY'S OPENING STATEMENT

Senator COCHRAN. Mr. Smith, you may proceed.

Mr. SMITH. Thank you, Mr. Chairman, Senator Burns.

I am pleased to have this opportunity to discuss the 1998 budget and program proposals for the Farm and Foreign Agricultural

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Services mission area of USDA. You have already introduced the Administrators and also our representative from the budget office at USDA. Statements by the Administrators have also been submitted for inclusion in the record. I will summarize my own prepared statement, after which we will be pleased to respond to your questions.

Mr. Chairman, a fundamental goal of the Farm and Foreign Agricultural Services mission area is to secure the long-term economic vitality and global competitiveness of American agriculture by expanding trade and economic opportunities, and promoting income growth and development throughout rural America. We are the production agriculture mission area at USDA. How we accomplish our mission will, in large part, be determined by the new policies set in place by the 1996 farm bill. And one of our primary tasks this past year has been to implement the policy and program changes provided in that act.

As a result of our efforts, nearly 99 percent of eligible acres were entered into production flexibility contracts last year. Although the new farm bill has provided much greater flexibility to our farmers in their production and marketing decisions, it has also increased the risk inherent in farming by reducing the Federal Government's role in supporting income and managing supplies.

Consequently, we remain concerned about the adequacy of the safety net for our producers and have been working diligently to expand and improve programs which help producers manage their price and production risk. At the same time, we have continued our efforts to reduce expenses, improve efficiency, and deliver responsive, quality service to our farm and rural customers.

The Farm Service Agency [FSA] is a major part of our mission area. The Farm Service Agency administers the farm credit programs, several conservation programs, and the domestic commodity price and income support programs of the Commodity Credit Corporation.

The farm credit programs administered by FSA continue to serve as a vital source of credit for our Nation's farmers and ranchers. The budget continues the trend toward emphasizing guaranteed loans, which are made in partnership with private lenders and have a low subsidy cost for the taxpayers. We remain responsive, however, to the continued need for direct loans, which are targeted to beginning farmers and members of socially disadvantaged groups who show promise for success but would be unable to obtain credit elsewhere.

The Conservation Reserve Program is the major conservation program administered by FSA. The 1996 farm bill reauthorized the CRP, set maximum enrollment at 36.4 million acres, and switched the program's financing from direct appropriations to CCC funding. The 1998 budget assumes that a competitive bid process will be used to enroll nearly 19 million acres of new and expiring CRP contract acreage in 1997. Enrollments in subsequent years are assumed to gradually increase total enrollment to 36.4 million acres by the year 2002.

Signup for CRP regular enrollment was held March 3 through March 28. Preliminary results from the field indicate that landowners submitted nearly 302,000 offers to enroll almost 26 million

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acres, of which about 18 million acres are currently under contracts that expire at the end of September.

With technical assistance from the Natural Resources Conservation Service, FSA will undertake the voluminous task of evaluating the environmental benefits of all offers and, by mid-June, will notify producers as to which acres have been accepted in the program. Continuous signup is also in place for certain high-priority practices involving small acreages, such as riparian buffers, filter strips, and windbreaks.

The budget also reflects provisions of the 1996 farm bill authorizing CCC funding for a number of new conservation programs, including the Environmental Quality Incentives Program, which replaces the Agricultural Conservation Program [ACP]. EQIP is administered by the Natural Resources Conservation Service, in cooperation with the Farm Service Agency.

Reflecting the trend for Federal outlays for farm price and income support programs, total CCC outlays have declined from the 1986 peak of \$26 billion to \$4.6 billion in 1996. This is the first time CCC outlays have dropped below the \$5 billion mark since 1981.

Including conservation programs and other programs for which CCC funding was authorized by the 1996 farm bill, CCC outlays are projected to total \$7.8 billion in 1997, and \$9.9 billion in 1998, and decline to about \$7.6 billion by the year 2002.

Changes made by the 1996 farm bill have diminished the traditional role of the farm programs as a buffer against fluctuations in production and commodity prices. Our greatest challenge is to find new ways to help farmers thrive in an increasingly risky environment and yet not be involved in the micromanagement of agricultural decisions.

The budget reflects legislation that we will be proposing to the authorizing committees to improve the safety net for farmers. Our legislation provides discretionary authority to extend commodity loans for 6 months during periods of depressed market prices or market disruptions, allows managed haying and grazing of CRP acreage, increases fruit and vegetable planting flexibility for acreage enrolled in the production flexibility contracts, and provides for greater flexibility in the timing of contract payments.

For the salaries and expenses of the Farm Service Agency, we are requesting a total appropriated level of \$954 million, a net decrease of \$1.9 million from 1997. Our staffing reductions for 1998 continue to run well ahead of those projected in the Department's reorganization plan. The 1998 budget calls for staffing levels of about 5,900 Federal staff-years and 9,900 non-Federal county office staff-years—reductions of about 270 and 1,850 staff-years, respectively, from the 1997 levels. We expect to achieve this reduction through a combination of about 530 buyouts and a reduction in force of about 1,600 staff-years.

In addition, as part of the Department's streamlining initiative and reflecting changes made by the farm bill, the budget projects that 500 Farm Service Agency offices will be closed by the end of 1999. This issue of office closures is a very sensitive topic, and I want to take a moment here to put the issue in an appropriate context.

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First of all, although there have been many stories out in the States—and I know that many of you have heard from your constituents on this—the Secretary has not yet approved any plan for how the closures might be accomplished. Moreover, he has made it clear there will be no further office closures at this time beyond a few remaining closures that have been planned for some time in order to reach our original goal of about 2,500 service centers.

Second, the Secretary has asked each of the involved agencies, including the Farm Service Agency as well as the USDA Service Center Implementation Team, to give their best advice as to how we can organize within the budget levels. As you know, the service center approach means that the number of offices open for our customers relates to the budgets of other agencies in addition to the Farm Service Agency.

Third, as USDA develops its approach to meeting the budget requirements over time, it will do so in close consultation with those that would be most affected.

In short, while we have made a general commitment that we will reduce the number of our service centers, we have made no decisions about individual offices. We are committed to working with the Congress as we proceed with our review, and will keep you fully apprised of our planning.

The Risk Management Agency [RMA] is also a very important agency within our mission area. The Risk Management Agency and the Federal Crop Insurance Corporation play a pivotal role in fulfilling the mandates of the 1996 farm bill, while ensuring that American agriculture remains solid, solvent, and globally competitive into the 21st century. To accomplish these tasks, RMA intends to refine existing products, create innovative, cost-effective tools, educate farmers and the public, and expand its partnership with the private insurance sector and the agriculture community.

The administration's proposal to make revenue insurance available nationwide reflects the strong demand among producers that we have seen for new revenue insurance products, such as crop revenue coverage, income protection, and revenue assurance. In implementing the revenue insurance programs, no additional premium subsidy has been paid, and the expected 1996 loss ratio experience is within the statutory limits and comparable to RMA's standard multiperil production risk coverage.

To offset the additional delivery expenses and the expected growth involved in expanding revenue insurance nationwide, the administration proposes to reduce the reimbursement rate paid to private insurance companies for delivery expense, as well as the loss ratio used to establish the premium rate structure.

Under this proposal, the reimbursement rate for delivery expenses would be reduced from 28 percent under current law to 24.5 percent of the premium for multiperil coverage. This reduction is based on extensive analysis conducted by our Risk Management Agency and the General Accounting Office and would reduce discretionary spending for delivery expenses by \$203 million under current law to \$150 million under the proposal. Further, our proposal would make a portion of the overall reimbursement rate discretionary and subject to appropriation, whereas current law treats only the sales commissions portion of the reimbursement as discre-

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tionary. We believe this change offers insurance companies more flexibility for adjusting to the reduced reimbursement rate.

The budget provides \$68 million in discretionary spending to pay Risk Management Agency's administrative expenses, which reflects a modest increase of \$4 million for full-time staff positions, to adjust for recent losses and to improve RMA's ability to service participating private sector companies.

Turning now to the international side of the Farm and Foreign Agricultural Services mission area, I am pleased to report that exports of U.S. farm and food products posted another sales record in 1996. Exports climbed to \$59.8 billion, a gain of more than \$5 billion from the previous year. With the strong back-to-back gains of the last 2 years, U.S. agricultural exports have increased by some \$19 billion—or close to 50 percent—since 1990. As a result, agricultural exports supported 1 million jobs both on and off the farm, one-third of which were in rural areas.

Continued progress in the international arena is crucial to the economic security of American farmers and ranchers. The changes made in domestic farm programs by the 1996 farm bill have made U.S. producers more dependent than ever on exports to maintain and expand their incomes. American agriculture is currently twice as dependent on overseas sales as the U.S. economy as a whole, and the sector will be 2½ times as export-dependent by the turn of the century. It is critical, therefore, that we continue our aggressive trade promotion efforts to help U.S. producers and exporters take full advantage of emerging export market opportunities. The 1998 budget continues USDA's commitment to export promotion and growth by providing a total program level of just under \$7.7 billion for international programs and activities.

For the CCC export credit guarantee programs, the budget provides a total program level of \$5.7 billion. Our proposals continue two initiatives designed to increase the utility of the CCC export credit programs, supplier credit guarantees, and facilities finance guarantees.

The budget provides higher program levels for our two export subsidy programs, the Export Enhancement Program [EEP] and the Dairy Export Incentive Program. In the case of EEP, we propose to make available \$500 million, the maximum level permitted by the 1996 farm bill.

For the Market Access Program, the budget continues funding at its maximum authorized level of \$90 million.

For Public Law 480 foreign food assistance, the budget proposes a total program level of \$990 million, a reduction of \$57 million from the current estimates for 1997. Our 1998 request level is expected to provide for approximately 3.2 million metric tons of commodity assistance, unchanged from the current tonnage estimate for 1997.

For the Foreign Agricultural Service, the budget proposes a funding level of \$151 million, an increase of \$15 million above the 1997 level. Most of the proposed increase will be used to help meet the cost of several FAS activities which are currently supported with CCC funds made available to FAS through reimbursable agreements. These activities include the Emerging Markets Program and the operating costs of the CCC computer facility, which serves

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as the Department's collection point for international production intelligence and crop estimates.

The FAS appropriations request also includes \$2.4 million for the Cochran Fellowship Program, which will continue the program at its current 1997 level. The budget also includes new provisions to address the difficulties in accurately estimating and funding the annual operating cost of FAS overseas offices.

First, the budget provides an advance appropriation of \$3 million for 1999 to fund documented wage and price increases and/or exchange rate losses incurred during 1998. Second, the budget proposes that funds appropriated to FAS in 1998 be available for obligations for 2 years rather than 1 year.

In closing, I would like to note that today's budget realities mean that the Government must be leaner and more efficient, but the era of responsive and responsible Government is not over. While there are things that Government cannot do or Government should not do, there are many legitimate public needs that only Government can meet. When it comes to advancing the stability, sustainability and economic vitality of American agriculture and of our farmers and ranchers, who are the bedrock of our Nation's agricultural bounty, the FFAS mission area has a vital role to play.

Mr. Chairman, members of the committee, that concludes my statement. We will be pleased to answer any questions that you might have.

PREPARED STATEMENTS

Senator COCHRAN. Thank you very much, Mr. Secretary. We thank you again for being here and for helping us to understand the details of this budget request. We have your written statements and they will be made part of the record.

[The statements follow:]

PREPARED STATEMENT OF DALLAS SMITH

Mr. Chairman and members of the Subcommittee, I am pleased to have this opportunity to discuss the 1998 budget and program proposals for the Farm and Foreign Agricultural Services mission area of USDA. With me today are August Schumacher, Administrator of the Foreign Agricultural Service; Christopher Goldthwait, the General Sales Manager; Randy Weber, Acting Administrator of the Farm Service Agency; Kenneth Ackerman, Administrator of the Risk Management Agency; and Dennis Kaplan from the Office of Budget and Program Analysis.

Statements by the Administrators, providing details on their agencies' budgets and program proposals for 1998, have been submitted to the Subcommittee. My statement will summarize the proposals, after which we will be pleased to respond to your questions.

A fundamental goal of the Farm and Foreign Agricultural Services mission area is to secure the long-term economic vitality and global competitiveness of American agriculture by expanding trade and economic opportunities and promoting income growth and development throughout rural America. We are the "production agriculture" mission area. We work to keep America's farmers and ranchers—the linchpins of our agricultural economy—in business.

How we accomplish our mission will in large part be determined by the new policies set in place by the Federal Agriculture Improvement and Reform Act of 1996 (the 1996 Act), and one of our primary tasks this past year has been to implement the policy and program changes provided for in the Act. As a result of our efforts, nearly 99 percent of eligible acres were entered into production flexibility contracts last year.

Although the 1996 Act has provided much greater flexibility to our farmers in their production and marketing decisions, it has also increased the risks inherent in farming by reducing the Federal government's role in supporting incomes and

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managing supplies. Consequently, we remain concerned about the adequacy of the safety net for our producers and have been working diligently to expand and improve programs which help producers manage their price and production risks. At the same time, we have continued our efforts to reduce expenses, improve efficiency, and deliver responsive, quality service to our farm and rural customers.

FARM SERVICE AGENCY

The Farm Service Agency (FSA) administers the farm credit programs, several conservation programs, and the domestic commodity price and income support programs of the Commodity Credit Corporation (CCC). The CCC is also the source of funding for most of the cost-share and land retirement conservation programs administered by the FSA and the Natural Resources Conservation Service (NRCS), and many of the export programs administered by the Foreign Agricultural Service (FAS).

Farm Credit Programs

The farm credit programs administered by FSA continue to serve as a vital source of credit for our nation's farmers and ranchers. They provide a safety net for producers who suffer a financial setback.

This budget continues the trend toward emphasizing guaranteed loans, which are made in partnership with private lenders and have a low subsidy cost for taxpayers. We remain responsive, however, to the continued need for direct loans, which are targeted to beginning farmers and members of socially disadvantaged groups who show promise for success but would be unable to obtain credit elsewhere. Our goal is to assist borrowers, through supervised credit, to achieve a successful agricultural operation and graduate to private credit. Far more attention than in prior years is being paid to repayment ability and adequate security.

The 1998 budget provides for a total of about \$2.8 billion in farm credit program loans and guarantees, which is about \$300 million less than the amount that can be supported by the 1997 appropriation. Of the reduction, about \$200 million is in the guaranteed farm ownership loan program. However, the 1998 budget level of \$400 million is consistent with the actual demand for the program in recent years. The unsubsidized guaranteed farm operating loan program would be maintained at a level of about \$1.7 billion. The remaining farm ownership and operating programs are generally funded at the 1997 supportable levels with a modest increase for the credit sales program. In addition, the 1998 budget proposes to maintain the emergency disaster loan program at \$25 million.

Commodity Credit Corporation

Reflecting the trend for Federal outlays for farm price and income support programs, total CCC outlays have declined from the 1986 peak of \$26 billion to \$4.6 billion in 1996. This is the first time CCC outlays have dropped below \$5 billion since 1981. Including conservation programs and other programs for which CCC funding was authorized by the 1996 Act, CCC outlays are projected to total \$7.8 billion in 1997 and \$9.9 billion in 1998, and decline to about \$7.6 billion by 2002.

Beginning in 1998, in response to recommendations of the Office of the Inspector General, the request for appropriations to reimburse CCC for net realized losses will cover the actual amount of the unreimbursed losses incurred 2 years earlier. The 1998 budget requests \$784 million for the balance of 1996 losses not reimbursed through appropriations in 1996 and 1997. Appropriations to reimburse CCC for net realized losses incurred in 1997 will be requested in the 1999 budget.

Provisions of the 1996 Act also limit CCC expenditures for computer equipment and cap reimbursements to agencies for administrative support services at 1995 levels.

Conservation Programs

The Conservation Reserve Program (CRP) is the major conservation program administered by FSA. The 1996 Act reauthorized the CRP, set maximum enrollment at 36.4 million acres, and switched the program's financing from direct appropriations to CCC funding. The legislation also redefined the program, changing its primary focus from highly erodible land conservation and supply management to environmental protection, with wildlife habitat and water quality improvements joining erosion reduction as primary program objectives.

The 1998 budget assumes a competitive bid process will be used to enroll nearly 19 million acres of new and expiring CRP contract acres in 1997. This figure is not, however, a target such as was used by CRP in the 1980's. Instead, enrollment will depend upon the nature of the bids. The goal of the CRP is to only retire lands where the benefits to society from the retirement from agricultural production ex-

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ceed the costs. Enrollments in subsequent years are assumed to gradually increase total enrollment to 36.4 million acres by 2002.

Signup for CRP regular enrollment was held March 3 through March 28. Results as of March 21 indicate that landowners submitted over 240,200 offers to enroll almost 20 million acres, of which about 14.7 million are currently under contracts that expire in September. With technical assistance from NRCS, FSA will undertake the voluminous task of evaluating the environmental benefits of all offers, and by mid-June will notify producers as to which acres have been accepted into the program. Continuous signup is also in place for certain high priority practices involving small acreages, such as riparian buffers, filter strips and windbreaks.

The budget also reflects provisions of the 1996 Act authorizing CCC funding for a number of new conservation programs, most of which will be administered by NRCS in cooperation with FSA.

The Agricultural Conservation Program, the Colorado River Basin Salinity Control Program, the Water Quality Incentives Program, and the Great Plains Conservation Program were replaced by the Environmental Quality Incentives Program. The Flood Risk Reduction Program provides incentives to move farming operations from frequently flooded land, and the Conservation Farm Option gives producers incentives to create comprehensive farm plans. The Wildlife Habitat Incentives Program provides cost-share assistance to landowners to implement management practices improving wildlife habitat. The Farmland Protection Program provides for the purchase of easements limiting nonagricultural uses on prime and unique farmland.

Under the Emergency Conservation Program (ECP), the Department shares the cost of carrying out practices to assist and encourage farmers to rehabilitate farmland damaged by natural disasters. ECP received emergency funds of \$25 million in 1997, and on March 19 the Administration transmitted to Congress a request for ECP supplemental funding of \$20 million, plus a contingency reserve of \$17 million to be available at the request of the President. The 1998 President's budget does not include a request for funding ECP, but proposes the establishment of a new \$5.8 billion contingent reserve for emergency funding requirements for various disaster assistance needs. This fund would be available to the President for disaster relief purposes, including use in the Department's emergency conservation activities.

CCC outlays for CRP and other conservation programs are projected in the 1998 budget to increase from negligible levels in 1996, when rental payments were funded through appropriations, to \$1.9 billion in 1997 and to \$2.2 billion in 1998.

Commodity Programs

The 1996 Act replaced the deficiency payment program which had been in place since the 1970's with a new program of payments that generally are not tied to market prices or to current plantings. Dairy policy also is changed under the 1996 Act with a phaseout of price support and consolidation of milk marketing orders. The new law also alters the sugar and peanut programs. As a result, a great deal of the volatility associated with forecasting commodity program outlays has been removed.

Commodity program outlays are a barometer of changing programs and policies. The 1998 budget projects that CCC outlays for commodity programs will increase from about \$5 billion in 1997 to \$6.2 billion in 1998, and then decline again to about \$4 billion by 2002.

This budget also reflects legislation that we will be proposing to the authorizing committees to improve the safety net for farmers, reflecting the President's pledge when he signed the 1996 Act. Our legislation provides discretionary authority to extend commodity loans for 6 months during periods of depressed market prices or market disruptions, allows managed haying and grazing of CRP acreage, increases fruit and vegetable planting flexibility for acreage enrolled in production flexibility contracts, and provides for greater flexibility in the timing of contract payments. The change in CRP haying and grazing provisions is estimated to reduce CRP outlays by about \$25 million per year.

Legislation will also be proposed to expand revenue insurance coverage nationwide, improve farm credit services, and make other technical adjustments to improve farm programs.

Changes made by the 1996 Act have diminished the traditional role of the farm programs as a buffer against fluctuations in production and commodity prices. Our greatest challenge is to find new ways to help farmers thrive in an increasingly risky environment and yet not be involved in the micromanagement of agricultural decisions. That is why risk management has become a top priority, and why the President and the Department attach such importance to enactment of legislation designed to improve the programs that help farmers better manage price and production risk.

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FSA Salaries and Expenses

For FSA salaries and expenses we are requesting a total appropriated level of \$954 million, a net decrease of \$1.9 million from 1997.

Our staffing reductions for 1998 continue to run well ahead of those projected in the Department's reorganization plan. The 1998 budget calls for staffing levels of 5,877 Federal staff-years and 9,879 non-Federal county office staff-years—reductions of 269 and 1,850 staff-years, respectively, from 1997 levels. We expect to achieve this reduction through a combination of about 530 buyouts and a reduction in force of about 1,589 staff-years.

Since 1993, FSA has downsized its work force by approximately 4,700 FTE's, or about 21 percent, due to streamlining efforts and the programmatic impacts of the 1996 Act. The additional reduction of 2,119 FTE's proposed in the 1998 budget would bring the cumulative FSA work force reduction since 1993 to 30 percent. This breaks down to 34 percent for non-Federal county office employees and 23 percent for Federal employees, including Federal county farm credit staff.

As part of the Department's streamlining initiative, the budget projects that 500 county FSA offices will close by the end of 1999. No decisions have been made as to which offices will be affected, and none will be made without the appropriate consultations with Congress. In 1997, the Department will contract for an independent study of FSA and NRCS to look for additional opportunities for streamlining and increasing the efficiency of our service to customers, as well as undertake a major review of our regulations, in conjunction with NRCS, to significantly reduce the paperwork burden on farmers.

RISK MANAGEMENT AGENCY

Farmers today face a risk environment dramatically different from that which existed a few years ago. Deficiency payments and ad hoc disaster aid have been eliminated, and a number of other price and production assistance programs have been significantly reduced by the 1996 Act and other legislation. To fill this void, producers must take active steps to reduce their agricultural risks.

The 1996 Act created the Risk Management Agency (RMA) to administer the crop insurance program and to carry out other risk management functions. Previously, the crop insurance program was administered by the FSA, which retains responsibility for the Noninsured Crop Disaster Assistance Program (NAP), and which provides basic catastrophic crop insurance through its county offices in States where private crop insurance resources are limited.

The RMA and the Federal Crop Insurance Corporation (FCIC) play a pivotal role in fulfilling the mandates of the 1996 Act while ensuring that American agriculture remains solid, solvent, and globally competitive into the 21st century. To accomplish these tasks, RMA intends to refine existing products, create innovative, cost-effective tools, educate farmers and the public, and expand its partnerships with the private insurance sector and the agricultural community.

The 1998 budget provides funding for the crop insurance program administered by RMA under both current law and new legislation to be submitted to the authorizing committees to improve the safety net for farmers by establishing a nationwide program for revenue insurance. Revenue insurance protects producers' incomes against shortfalls due to either price or yield fluctuations. Our legislative proposal is intended to be budget neutral overall. However, it provides for a reduction in the discretionary spending portion of program expenses.

Under current law, funding for sales commissions, which has been treated as mandatory spending, shifts to discretionary spending in 1998. All other expenses of RMA are treated as mandatory, although subject to appropriation, for which the budget provides "such sums as may be necessary."

The Administration's proposal to make revenue insurance available nationwide reflects the strong demand among producers that we have seen for new revenue insurance products, such as Crop Revenue Coverage, Income Protection, and Revenue Assurance. However, current law limits RMA's authorities in the revenue insurance area to pilot programs. In implementing the revenue insurance programs, no additional premium subsidy has been paid, and the expected 1996 loss ratio experience is within the statutory limits and comparable to RMA's standard multiperil production risk coverage. The additional cost to the Federal government has been an increase in delivery expenses, including underwriting gains paid to the insurance companies.

To offset the additional delivery expenses and the expected growth involved in expanding revenue insurance nationwide, the Administration proposes to reduce the reimbursement rate paid to private insurance companies for delivery expenses, as well as the loss ratio used to establish the premium rate structure.

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Under this proposal, the reimbursement rate for delivery expenses would be reduced from 28 percent under current law to 24.5 percent of the premium for multi-peril coverage. This reduction is based on extensive analysis conducted by RMA and the General Accounting Office and would reduce discretionary spending for delivery expenses from \$203 million, under current law, to \$150 million under the proposal. Further, our proposal would make a portion of the overall reimbursement rate discretionary and subject to appropriation whereas current law treats only the sales commissions portion of the reimbursement as discretionary. We believe this change offers insurance companies more flexibility for adjusting to the reduced reimbursement rate.

Finally, our legislative proposal will provide more flexibility for determining subsidy amounts and establishing pilot programs. It will also make certain changes in program compliance requirements. None of these changes is expected to have a budgetary impact.

The current law budget also includes funding for \$257 million in mandatory account spending to reimburse the reinsured companies for the delivery of limited and buy-up coverage. This is a decrease from 1997 due to the legislative mandate that a portion of administrative expenses paid to the reinsured companies be transferred to the discretionary account. Under proposed legislation, it is estimated that an additional \$10 million in administrative reimbursements to reinsured companies would be required.

RMA Salaries and Expenses

Staff levels for RMA have decreased dramatically in recent years even as the program has grown in size, scope, and expectations. Overall staff resources, including administrative resources from the FSA, have been reduced by more than 20 percent since 1993. As of September 30, 1996, there were 536 employees in RMA, at headquarters and in 10 regional service offices and 6 compliance offices.

Under current law, the budget provides \$68 million in discretionary spending to pay RMA's administrative expenses, which reflects a modest increase of \$4 million for full-time staff positions to adjust for recent losses and to improve RMA's ability to service participating private sector companies. Funding for the new and expanded programs is intended to ensure that the programs are implemented as expeditiously as possible. The current law budget also includes \$203 million for the payment of sales commissions out of the discretionary account. Our legislative proposal would reduce the discretionary portion of the administrative reimbursements paid to reinsured companies to \$150 million and allow for the payment of expenses other than just sales commissions.

FOREIGN AGRICULTURAL SERVICE

Turning now to the international side of the FFAS mission area, I am pleased to report that exports of U.S. farm and food products posted another sales record in 1996. Exports climbed to \$59.8 billion, a gain of more than \$5 billion from the previous year.

With the strong, back-to-back gains of the last 2 years, U.S. agricultural exports have increased by some \$19 billion, or close to 50 percent since 1990. As a result, agriculture led all U.S. trade categories as the most significant contributor to the U.S. balance of trade and supported one million jobs both on and off the farm, one-third of which were in rural areas.

Early forecasts of agricultural exports for the current year suggest a more moderate sales pace. Current projections for 1997 call for exports to reach \$56.5 billion, down about 6 percent from 1996, but still the second highest value on record. The anticipated reduction mainly reflects increased foreign production of grains and lower average prices for wheat and coarse grains. High-value exports are forecast to set another record this year.

These strong export gains provide convincing evidence that American agriculture is reaping the benefits of the North American Free Trade Agreement, the Uruguay Round Agreement on Agriculture, and the more than 200 other trade agreements the Administration has successfully negotiated. As a result of these agreements, we now have the most open world market of this century and enormous opportunities for additional export growth.

Continued progress in the international arena is crucial to the economic security of American farmers and ranchers. The changes made in domestic farm programs by the 1996 Act have made U.S. producers more dependent than ever on exports to maintain and expand their incomes. American agriculture is currently twice as dependent on overseas sales as the U.S. economy as a whole, and the sector will be two-and-a-half times as export-dependent by the turn of the century. It is critical, therefore, that we continue our aggressive trade promotion efforts to help U.S. pro-

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ducers and exporters take full advantage of emerging export market opportunities. At the same time, we must continue to adapt and improve these efforts to meet today's challenges and keep pace with intense competition.

Much of our recent export success can be directly linked to the combined effects of our trade policy initiatives, export assistance programs, and the market development efforts of FAS working with our agricultural cooperators and others, including participants in the Market Access Program (MAP).

Overseas, FAS field offices support USDA programs and the U.S. agricultural export drive in 95 locations around the globe. These offices continue to function as the "eyes and ears" for U.S. agricultural exporters, and the thousands of attaché reports that they prepare each year are now available to the widest possible U.S. audience almost instantly via the Internet. In line with the Department's Long-Term Agricultural Strategy, we have increased staff in the Pacific Rim and Latin America, and decreased staff in Europe.

Domestically, FAS has expanded its outreach and information efforts to educate U.S. businesses about the tremendous potential of global markets. A key part of this effort is the location of export advisors at the state level—at the California, Colorado, and Oregon State Departments of Agriculture and the Iowa State Office of the FSA.

FAS has joined forces with cooperators and MAP participants such as the American Hardwood Export Council and the American Seafood Institute, and with local entities such as state departments of agriculture across the country to sponsor export seminars for small and new-to-export businesses. Last July, in conjunction with FSA, FAS conducted outreach efforts in 47 states plus Puerto Rico. The state-hosted events attracted over 2,000 participants, bringing together producers, bankers, agribusinesses, exporters, shippers, universities, and Federal, state, and local officials.

Through these and other programs, the Department plays a vital role in working with the private sector to identify emerging market opportunities overseas and in using our export promotion and market development tools to achieve our shared trade objectives.

The 1998 budget continues USDA's commitment to export promotion and growth by providing a total program level of just under \$7.7 billion for international programs and activities.

For the CCC export credit guarantee programs, the budget provides a total program level of \$5.7 billion, which includes \$5.3 billion for GSM-102 short-term guarantees and \$400 million for GSM-103 intermediate-term guarantees. The overall increase of \$200 million above the 1997 level consists of guarantees which will be made available to emerging markets for U.S. agricultural products.

The GSM-102 program level continues two other credit initiatives—supplier credit guarantees and facilities financing guarantees. The budget provides for \$350 million of supplier credit guarantees, an increase of \$100 million above the 1997 level. These guarantees, which were first made available in late 1996, allow exporters of U.S. agricultural products to obtain CCC guarantees for short-term credit extended directly to foreign buyers. Supplier credit guarantees are expected to be particularly useful in facilitating sales of processed and consumer-ready products, which are among the fastest-growing components of U.S. agricultural exports. To date, supplier credit guarantees have been made available to facilitate U.S. agricultural exports to Mexico, Guatemala, El Salvador, Panama, Jamaica, Indonesia, Malaysia, Singapore and the Philippines.

Also under GSM-102 authority, the budget includes \$100 million of facilities financing guarantees, unchanged from the current estimate for 1997. Under this initiative, CCC will provide guarantees for the establishment or improvement of facilities and/or services designed to address infrastructure barriers to increased export sales. We anticipate publishing an interim final rule this spring for this program.

The budget provides higher program levels for our two export subsidy programs in 1998—the Export Enhancement Program (EEP) and Dairy Export Incentive Program (DEIP). In the case of EEP, we propose to make available \$500 million, the maximum level permitted by the 1996 Act and a \$400 million increase over 1997. The budget includes \$89 million for DEIP in anticipation of higher sales under this program.

One of the more promising developments in 1996 was the virtual suspension of global export subsidies, which mask market signals and distort trade. EEP and DEIP program activity was reduced in 1996 as a result of world commodity supply and competitive conditions. Unfortunately, the responsible restraint by the United States has been tested by renewed European Union subsidization, which began last September. We must be ready to protect our agricultural trade interests including the resumption of EEP, if necessary, and therefore, we have provided full funding for EEP in 1998.

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For the Market Access Program (MAP), formerly the Market Promotion Program, the budget continues funding at its maximum authorized level of \$90 million. The MAP provides cost-share assistance to nonprofit agricultural trade organizations, state and regional trade groups, and private companies which carry out export promotion activities overseas. The program has proven to be particularly effective in promoting sales of high-value products.

During the past year, changes have been made in MAP to target more resources to small businesses. In 1996, 56 percent of the funds for promotion of branded products was made available to small entities, up from 41 percent in 1994, and another 20 percent was made available to farmer cooperatives. Additional program improvements recently have been made which are designed to broaden participation, clarify program criteria, strengthen evaluation and accountability, and simplify program requirements for participants.

The budget includes a proposed rescission of \$50 million in budget authority for the Public Law 480 Title I concessional sales program in 1997 in order to provide a partial offset for a supplemental appropriations request for the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). This proposal will reduce the Title I program level by \$60 million and estimated commodity shipments by 200,000 metric tons. However, allocations of commodity assistance already announced for 1997 will not be affected by the rescission because the reduction will be taken from a reserve of unallocated funds and from unobligated funds carried over from 1996.

For 1998, the budget proposes a total Public Law 480 program level of \$990 million, a reduction of \$57 million from the revised estimate for 1997. This reduction will occur in the Title I concessional sales program; funding for Titles II and III will remain largely unchanged from 1997 enacted levels. Our 1998 request level is expected to provide for approximately 3.2 million metric tons of commodity assistance, unchanged from the revised tonnage estimate for 1997.

The 1998 budget for Public Law 480 also shifts the budget and expenditures for the Title I program from the international affairs function to the agriculture function of the Federal budget. This proposal is an outgrowth of recent changes in the Title I statutory authorities, which have placed a much greater emphasis on the program's market development objectives. With these changes, the role and importance of the Title I program in the Department's overall long-term market development strategy has increased. Shifting Title I to the agriculture function will allow the program to be managed and budgeted as part of a consistent package of agricultural export programs.

FAS Salaries and Expenses

The Foreign Agricultural Service administers the Department's important trade, export, and international cooperation activities. As the Subcommittee will recall, last year's budget continued the pro-active approach to the fundamental objective of increasing U.S. agricultural exports by 50 percent by the year 2000. With the resources provided for 1997, FAS has expanded market development activities, including the Cooperator Program, and our domestic outreach efforts to facilitate the entry of small and medium sized producers into the international marketplace.

For 1998, the FAS budget proposes a funding level of \$150.9 million and 885 staff-years, an increase of \$15.4 million above the 1997 level. Most of the proposed increase will be used to help meet the costs of several FAS activities which are currently supported with CCC funds made available to FAS through reimbursable agreements. The budget proposes that future funding of these activities will be included in the FAS appropriation. With this change, their funding will no longer be subject to the annual limitation on CCC reimbursable agreements established by the 1996 Act.

These activities include the Emerging Markets Program, under which technical assistance and training are provided to promising overseas growth markets where there is potential to increase U.S. exports significantly over the long term. They also include the operating costs of the CCC Computer Facility, which serves as the Department's collection point for international production intelligence and crop estimates, and for other, related FAS Information Resources Management costs.

An increase of \$500,000 is requested to implement a systematic process to review, identify, and catalog technical barriers to trade and other technical requirements that limit export opportunities in the top 30 export markets accounting for the majority of U.S. agricultural trade. This review will lead to recommendations for overcoming the identified barriers and expanding U.S. exports to these markets.

For the Cochran Fellowship Program, the budget provides funding of \$2.4 million, unchanged from this year's level.

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The budget also includes new provisions to address the difficulties in accurately estimating and funding the annual operating costs of our overseas offices. First, the budget provides an advance appropriation of \$3 million for 1999 to fund documented wage and price increases and/or exchange rate losses incurred during 1998. Second, the budget proposes that funds appropriated to FAS in 1998 be available for obligation for 2 years rather than 1 year. This will allow any savings that may be realized in the cost of overseas operations to be carried over for use the following year.

In conclusion, today's budget realities mean that government must be leaner and more efficient, but the era of a responsive and responsible government is not over. While there are things that government can't do, or shouldn't do, there are many legitimate public needs that only government can meet. When it comes to advancing the stability, sustainability, and economic vitality of American agriculture, and of the farmers and ranchers who are the bedrock of our nation's agricultural bounty, the FFAS mission area has a vital role to play.

Mr. Chairman, that concludes my statement. We will be pleased to answer any questions you and other members of the Committee may have.

PREPARED STATEMENT OF BRUCE R. WEBER

Mr. Chairman and Members of the Subcommittee, I am pleased to present the fiscal year 1998 budget for the Farm Service Agency (FSA). When our statement was presented to you last year, Congress had just enacted the Federal Agriculture Improvement and Reform Act of 1996. That legislation made significant changes in the design and funding of the programs that this agency administers. Implementing the legislative changes and working toward increased cost savings are our major tasks in 1997. Our 1998 budget reflects the new direction in farm programs coupled with a significant contribution toward the bipartisan effort to balance the Federal budget by 2002. As I discuss the budget estimates for our various activities—price and income support and related programs of the Commodity Credit Corporation, conservation programs funded by the Commodity Credit Corporation, the farm credit programs of the Agricultural Credit Insurance Fund, and a number of others—I will highlight the major changes. To conclude, I will summarize our request for administrative support, noting the impact of the program and budget changes on FSA staffing.

COMMODITY CREDIT CORPORATION

Domestic farm commodity price and income support programs are administered by the Farm Service Agency and financed through the Commodity Credit Corporation, a government entity for which FSA provides operating personnel. The CCC is also the source of funding for most of the conservation programs administered by FSA and NRCS, and it funds most of the export programs administered by FAS. Funds are borrowed by the Corporation from the Treasury to finance CCC programs. The Corporation has the authority to have outstanding Treasury borrowings of up to \$30 billion at any one time. Commodity support operations, handled primarily through loans and payment programs, and some limited purchase programs, currently include those for wheat, corn, soybeans, minor oilseed crops, cotton (upland and extra long staple), rice, tobacco, milk and milk products, barley, oats, sorghum, peanuts and sugar.

COMMODITY PROGRAM OUTLAYS

The CCC budget attempts to capture the impact of economic or other conditions 2 years into the future. The current 1998 budget estimates largely reflect estimated supply and demand conditions for the 1997 crop. However, a great deal of the volatility associated with forecasting commodity program outlays has been removed due to the provisions of the 1996 Farm Bill. The price and income support program funded by CCC for the 1996 crops and beyond are determined by that legislation, which has fundamentally restructured income support programs and discontinued supply management programs for producers of feed grains, wheat, upland cotton, and rice. The deficiency payment program, which was tied to market prices and had been in place since the early 1970's, has been replaced with a new income support program of payments that generally are not related to current plantings or to market prices. The new law also expands planting flexibility and suspends the authority for the Secretary to require farmers to idle a certain percentage of their cropland in order to be eligible for income support payments.

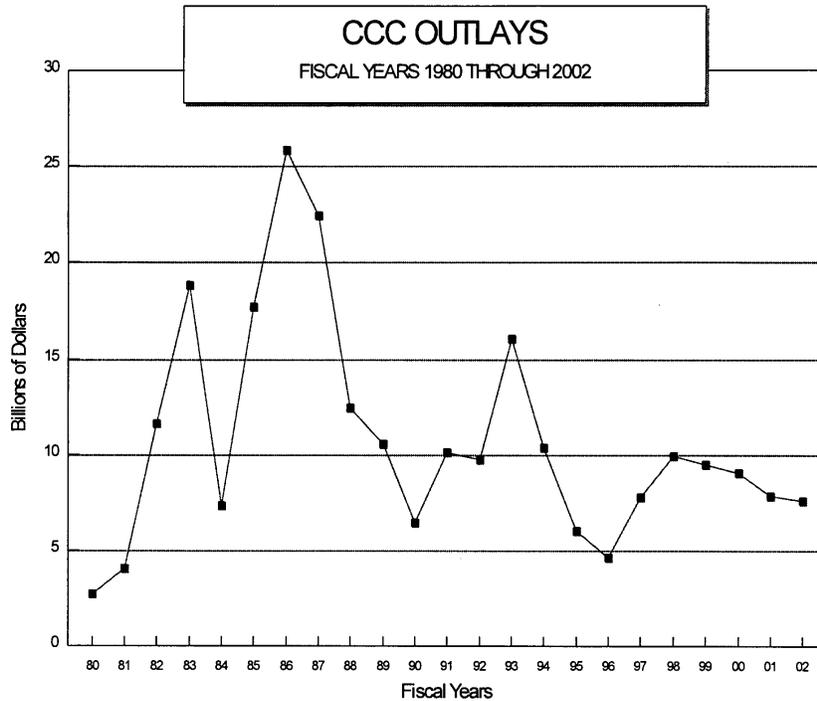
The budget includes proposed legislation that will build better programs to help farmers manage risk and thereby improve the safety net for farmers, reflecting the

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President's concerns when he signed the 1996 Farm Bill. The proposed legislation would provide discretionary authority to extend commodity loans for 6 months during periods of depressed market prices or market disruptions, allow for managed haying and grazing on CRP acres, increase fruit and vegetable planting flexibility for acreage enrolled in production flexibility contracts, and provide greater flexibility in the timing of production flexibility contract payments. The change in CRP haying and grazing provisions is estimated to reduce CRP outlays by about \$25 million per year.

Mr. Chairman, reflecting the trend for Federal outlays for farm price and income support programs, total CCC outlays have declined from the fiscal year 1986 high of \$26 billion to \$4.6 billion in fiscal year 1996. This is the first time CCC outlays have dropped below \$5 billion since fiscal year 1981. Including conservation programs and other programs for which CCC funding was authorized by the 1996 Farm Bill, CCC outlays are projected to total \$7.8 billion in fiscal year 1997 and \$9.9 billion in fiscal year 1998, and decline to about \$7.6 billion by fiscal year 2002. This outlay trend is shown on the graph below.



For fiscal year 1998, total net outlays are expected to increase by \$2.1 billion to \$9.9 billion—about a 27-percent increase, reflecting higher net commodity lending outlays of \$467 million; the absence of deficiency payment refunds in fiscal year 1998, whereas \$1.1 billion will be received in 1997; an increase of \$400 million in the export enhancement program; higher net interest expenditures of \$297 million; and increased conservation program expenses of \$241 million. While no deficiency payment refunds are estimated for fiscal year 1998, production flexibility contract payments will decline by \$644 million.

ADP Expenses and other Section 11 Activities

Section 161 of the 1996 Farm Bill significantly limits the use of CCC funds for operating expenses. CCC no longer has authority to purchase personal property, except within authorized limitations. CCC spending for equipment or services relating to automated data processing (ADP), information technologies or related items (including telecommunications equipment and computer hardware and software, but excluding reimbursable agreements), was limited by the 1996 Act to \$170 million in fiscal year 1996, and \$275 million for the six-year period including fiscal years 1997 through 2002, unless additional amounts for such contracts and agreements

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are provided in advance in appropriation acts. The amount actually obligated for ADP-related expenses in fiscal year 1996 was \$144 million. The 1996 Act also requires that CCC submit to Congress on a quarterly basis an itemized report of all expenditures over \$10,000, excluding program payments.

Section 161 of the 1996 Act also amended Section 11 of the CCC Charter Act to limit the uses of CCC funds for reimbursable agreements and transfers and allotments of funds to State and Federal agencies. Starting in fiscal year 1997, the total of CCC fund uses under that section in a fiscal year, including agreements for ADP or information resource management activities, may not exceed the total of such allotments and transfers in fiscal year 1995. CCC obligations for Section 11 activities in fiscal year 1995 were \$45.6 million, and obligations in fiscal year 1996 were \$49.4 million.

The 1998 budget assumes that expenditures for computer and telecommunications equipment will total \$109 million in fiscal year 1997 and \$104 million in fiscal year 1998. The budget projects annual spending under the cap on reimbursable agreements will total \$41.2 million in fiscal year 1997 and \$35.6 million in fiscal year 1998.

Reimbursement for Realized Losses

The 1998 budget reflects an estimated need for \$784 million to reimburse CCC for its realized losses, a reduction of \$716 million from the fiscal year 1997 reimbursement of \$1.5 billion. In prior years, the request for appropriations to reimburse the CCC for net realized losses has been based on an estimate of losses incurred one year earlier which have not been previously reimbursed. The estimate could exceed or fall short of the actual amount of loss. Beginning in 1998, in response to OIG recommendations, the request for appropriations to reimburse CCC for net realized losses will cover the actual amount of the unreimbursed losses incurred 2 years earlier. Fiscal year 1996 losses totaled \$7.8 billion, of which \$5.5 billion was restored by appropriations in 1996 and \$1.5 billion was restored by appropriations in 1997, leaving a balance of \$784 million to be restored in 1998. Appropriations to reimburse CCC for net realized losses to be incurred in 1997, currently estimated to total \$9 billion, will be requested in the 1999 budget.

Appropriation Language Changes

Two CCC appropriation language changes are proposed in the budget:

- New language establishing a minimum program level for export credits for emerging markets.
- A shift in funding for the Emerging Markets Technical Assistance Program from CCC to FAS appropriation. With this change, these activities will be carried out with discretionary, rather than mandatory funding and will no longer be included in the annual limitation on Section 11 CCC reimbursable agreements and other transfers. The increase in FAS funding is offset by a \$10 million decrease in the fiscal year 1998 CCC reimbursable agreements and other transfers cap.

CCC-FUNDED CONSERVATION PROGRAMS

Conservation Reserve Program

The 1996 Farm Bill reauthorized the Conservation Reserve Program, established maximum enrollment at 36.4 million acres, and changed the program's financing from direct appropriation to CCC funding. The legislation also redefined the program, changing its primary focus from highly erodible land conservation and supply management to environmental protection, with wildlife habitat and water quality joining soil erosion reduction as primary program objectives.

Continuous signup is available for certain high priority practices involving small acreages, such as riparian buffers, filter strips, and windbreaks. Signup for CRP regular enrollment was held March 3 through March 28. I am pleased to report that as of March 21, the end of the third week of the 4-week signup, landowners had offered to enroll almost 20 million acres, of which about 14.7 million are currently under contracts that expire in September. The remaining 5.3 million acres are new offers. With technical assistance from the Natural Resources Conservation Service, FSA will carry out the massive job of evaluating the environmental benefits of all offers, and will notify producers by mid-June as to the acres that have been accepted into the program.

In 1997, CCC is making payments of approximately \$1.765 billion for rental costs and about \$8 million for sharing the cost of permanent cover on replacement acres. Fiscal year 1997 CRP technical assistance costs of \$83 million for NRCS and FS are funded by unobligated balances of CRP funds appropriated prior to enactment of the 1996 Farm Bill. For 1998, CCC program costs are expected to total approximately

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\$1.928 billion, consisting of \$1.667 billion for rental payments on previously enrolled and extended acres; \$246 million for cost-sharing of permanent cover on enrolled acres; and \$15 million for NRCS technical assistance funded under the CCC Section 11 cap on reimbursables and transfers. An additional \$24 million in NRCS and FS technical assistance costs in 1998 will be funded by unobligated balances of CRP appropriated funds.

Other CCC-Funded Conservation Programs

The 1996 Farm Bill restructured many of USDA's conservation programs and, as with the CRP, changed the financing to CCC funding. With the exception of the Flood Risk Reduction Program, the CCC-funded conservation programs are administered under the lead of NRCS. NRCS will discuss these programs with you in detail, and I will just mention them briefly.

The Wetlands Reserve Program was reauthorized by the 1996 Farm Bill, and funding of \$163.6 million is included in the CCC budget. The new Environmental Quality Incentives Program encompasses the objectives of four previous conservation programs: the Agricultural Conservation Program, the Water Quality Incentives Program, the Great Plains Conservation Program, and the Colorado River Basin Salinity Control Program. The CCC budget reflects \$200 million for the EQIP in 1998. The Conservation Farm Option is a pilot program which allows an eligible producer to receive a single payment totaling what he or she would have received separately under the CRP, WRP, and EQIP. For 1998, \$15 million is included for the CFO in the CCC budget. The new Farmland Protection Program will use \$18 million in 1998 to share with State and local governments the cost of acquiring conservation easements on specified farmland. CCC funding of \$22.5 million will be used in 1998 for the Wildlife Habitat Incentives Program, which shares the cost of developing habitat for upland wildlife, wetland wildlife, threatened and endangered species, fish, and other types of wildlife. The Flood Risk Reduction Program enables production flexibility program participants with acreage that is frequently flooded to receive in advance up to 95 percent of the production flexibility contract payments they are projected to receive from the time of enrollment in the FRRP through September 30, 2002. In exchange the producer must agree to terminate the production flexibility contract on FRRP acres, comply with swampbuster and conservation compliance requirements, and forgo future payments for disasters, crop insurance, and conservation programs, as well as loans for contract commodities, oilseeds, and extra-long staple cotton. The FRRP is funded at \$10 million in 1997, but no funding is proposed for 1998.

APPROPRIATED CONSERVATION PROGRAMS

Agricultural Conservation Program

As I indicated, the 1996 Farm Bill repealed the Agricultural Conservation Program in its sixtieth year and incorporated its objectives into the new Environmental Quality Incentives Program funded by CCC.

The fiscal year 1996 ACP appropriation of \$75 million remained available after April 4, 1996, to fund previously approved practices as well as new practices that met the objectives of the EQIP. Outlays under the program from 1996 and prior obligations, including long-term agreements, will continue for a number of years.

Emergency Conservation Program

The Emergency Conservation Program assists producers in rehabilitating farmland damaged by natural disaster and in carrying out emergency water conservation measures during periods of severe drought. The program shares the cost of practices to restore the land to its productive capacity as it existed prior to the disaster. As might be expected, funding needs for this program vary widely from year to year, depending upon the occurrence of natural disasters.

No ECP funding was provided in the fiscal year 1997 Appropriations Act, but supplemental funding of \$25 million was made available by the Omnibus Consolidated Appropriations Act. All of those funds were allocated, along with over \$8 million in unused allocations for prior disasters that were returned from the States and reallocated. As of March 28, \$277 thousand remains. As a result of winter storms in the West, flooding in the Ohio Valley, and other recent disasters, requests for emergency conservation assistance are expected to be substantial when flood waters recede and realistic estimates can be made. On March 19, the Administration forwarded to Congress a request for emergency supplemental appropriations, which includes an ECP request of \$20 million plus another \$17 million in contingency funding for ECP to be released upon the official request of the President.

The Budget requests no specific funding for the ECP for fiscal year 1998 but instead includes a request for a Governmentwide disaster contingency account.

Dairy Indemnity Program

The Dairy Indemnity Program compensates dairy farmers and manufacturers who, through no fault of their own, suffer income losses on milk or milk products removed from commercial markets due to residues of certain chemicals or other toxic substances. Payees are required to reimburse the Government if they recover their losses through other sources such as litigation. The 1998 appropriation request of \$100 thousand would cover program needs in an average year with no major contamination incidents. However, 1997 has already proven to be exceptional, with Arizona alone experiencing a loss in excess of \$120 thousand due to contamination of feed grown in soil containing residues of a pesticide used years ago. This claim, along with a sizable aflatoxin problem in Texas and smaller ones in six other States, has exhausted the full \$257 thousand available for allocation at the start of the year. Although additional requests from producers have come in, we have notified our county offices that no funds are currently available.

FARM CREDIT AND RELATED PROGRAMS

Agricultural Credit Insurance Fund

The programs of the Agricultural Credit Insurance Fund provide a variety of loans and loan guarantees to farm families who would be unable to obtain credit otherwise. The majority of FSA lending activity occurs in partnership with private lenders through the guarantee programs, which provide a safety net for producers by providing a means for them to continue to obtain credit from their regular lenders when they have suffered a financial setback. This budget continues the trend toward emphasizing guaranteed loans, which are most cost-efficient for the taxpayer because of their low subsidy cost. We remain responsive, however, to the continued need for direct loans, which are targeted to beginning farmers and members of socially disadvantaged groups. Our goal is to assist borrowers, through supervised credit, to achieve a successful agricultural operation and graduate to private credit.

The 1998 budget provides for a total program level of \$2.8 billion in ACIF loans and guarantees, approximately \$300 million less than the current estimate for 1997. Of this amount, \$2.3 billion would be for subsidized and unsubsidized loan guarantees, and \$532 million would be for direct loans.

Farm Ownership Loans.—For direct farm ownership loans we are requesting a loan level of \$30.8 million, which requires an appropriation of just over \$4 million. For guaranteed farm ownership loans in fiscal year 1998, we are requesting a loan level of \$400 million, which requires an appropriation of \$15.4 million.

Farm Operating Loans.—We are requesting a subsidy appropriation of \$29.6 million to enable us to make direct farm operating loans of \$450 million. For guaranteed farm operating loans, an appropriation of \$19.3 million will make possible \$200 million in loans with subsidized credit. For our largest farm operating loan program, unsubsidized guarantees, a request for \$19.9 million in appropriated funds will cover the Federal cost of \$1.7 billion in loans.

Other Loan Programs.—The Budget requests \$25 million for credit sales of acquired property, which requires budget authority of \$3.3 million. This program assists qualified applicants to purchase property in FSA inventory.

The Budget also proposes a subsidy of just over \$6 million to support a program level of \$25 million in emergency disaster loans in fiscal year 1998. I would like to note that in fiscal year 1997, in addition to the \$6.4 million regular appropriation, we have a carryover subsidy of \$28.9 million that will support additional emergency disaster loans of \$95.2 million. The carryover is from the funds that were made available in fiscal year 1996 by the 1997 Agriculture Appropriations Act, to remain available until expended. We expect to fully utilize these funds in the current fiscal year.

In addition, we are requesting \$132 thousand to provide \$1 million in Indian tribe land acquisition loans.

The 1998 budget proposes a farm credit program level close to the 1997 level but at a reduced cost, thanks to a combination of agency efforts to reduce direct loan delinquency rates and the benefits of expected lower interest rates in a strong economy. In 1997, total direct lending authority is \$568 million, supported by a subsidy of \$74 million. The budget, in contrast, estimates total direct lending authority of \$532 million for 1998, with a subsidy of \$43 million. So, while total direct lending authority decreases by about 6 percent, the supporting subsidy decreases by more than 40 percent. Through better management of the credit programs and by utilizing the tools provided in the 1996 Farm Bill, we will be able to continue to serve the credit needs of the Nation's small, family farmers while producing the kind of cost cutting performance necessary to achieve a balanced budget.

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State Mediation Grants

Since 1987, State Mediation Grants have enabled a number of States to develop programs to deal with conflicts involving distressed agricultural loans. The Department of Agriculture Reorganization Act of 1994 expanded the program from farm credit cases only, to include disputes concerning wetland determinations, conservation compliance, pesticides, and other issues. Operated primarily by State universities or departments of agriculture, the program provides a neutral mediator to assist producers in resolving disputes before they result in litigation, bankruptcy, or other serious consequences. Moreover, mediation, at \$200 to \$250 per case, offers significant savings over national level administrative hearings, which cost about \$3,000 to \$4,000 per case, not including indirect costs such as travel and salary of FSA employees involved in the appeal.

Currently 22 States have programs that qualify for grants. Three other States are developing programs, and additional States are considering doing so. For fiscal year 1998 the Budget requests \$4 million, an increase of \$2 million over fiscal year 1997, to meet the rising demand expected as a result of the program's broadened scope and to accommodate newly participating States.

ADMINISTRATIVE SUPPORT

The costs of administering all FSA programs are funded by a consolidated Salaries and Expenses account. The account is comprised of direct appropriation, transfers from program loan accounts under credit reform procedures, user fees, and advances and reimbursements from various sources. These reimbursements include funding from the Foreign Agricultural Service and Risk Management Agency for common administrative support activities provided by FSA personnel.

For FSA Salaries and Expenses we are requesting a total appropriated level of \$954 million, a net decrease of \$1.9 million from fiscal year 1997.

Our staffing reductions for 1998 continue to run well ahead of those projected in the Department's reorganization plan. The budget for FSA calls for 1998 staffing levels of 5,877 Federal staff-years and 9,879 non-Federal county office staff-years—reductions of 269 and 1,850 staff-years, respectively, from the 1997 levels of 6,146 and 11,729. We estimate that this total reduction of 2,119 staff-years will be achieved through a combination of about 530 buyouts and a reduction in force of about 1,589 staff-years. Salary and benefit savings of \$75.9 million from the proposed staffing reductions will be mostly offset by one-time separation costs estimated at \$56.3 million and by pay-related costs of \$18.9 million for remaining staff.

As a result of the 1996 Farm Bill, 1998 workload in some areas such as commodity program payments, conservation, basic farm record maintenance, and compliance will continue the decline begun this year. Other activities are expected to remain constant or, in some cases such as commodity loan activity, to increase.

Although FSA workload is lower in 1997 due to the 1996 Act, FSA is faced with a CRP signup that, as you know, was held March 3 through March 28 and will enroll as much as 19 million acres. The associated workload was not considered in the agency's analysis of Farm Bill workload because, although that Act provided the opportunity to increase enrollment, decisions concerning alternate enrollment levels had not been completed at the time of the analysis. The addition of this workload will stretch current resources and may require the hiring of temporary employees. The decision to increase enrollment levels includes enrolling an additional 8 million acres in 1998. Although workload is expected to continue to decline in 1998, required staffing reductions coupled with the increased enrollment level may again require relying upon temporary employees to fully accomplish CRP-related workload.

From 1993 through the current fiscal year, FSA has downsized its work force by approximately 4,700 FTE's, or about 21 percent, due to streamlining efforts and the programmatic impacts of the 1996 Farm Bill. The additional reduction of 2,119 FTE's proposed in the 1998 budget would bring the cumulative FSA work force reduction since 1993 to 30 percent, which breaks down to 34 percent for non-Federal county office employees and 23 percent for Federal employees, including Federal county farm credit staff.

The President's Budget projects that, as part of the USDA streamlining initiative, 500 county FSA offices will close by the end of fiscal year 1999. I would like to emphasize, however, that no decisions have been made as to which offices will be affected. We are currently in the planning stages of determining the various criteria that will be used as a basis for these decisions. However, we will not make any decisions without the appropriate consultations with Congress.

The Department is also planning an independent study of FSA, the Natural Resources Conservation Service, and other county-based agency activities to look for

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additional opportunities for streamlining and increasing the efficiency of our service to our customers.

Mr. Chairman, this concludes my prepared statement. I will be happy to answer your questions and those of the other Subcommittee Members at any time.

PREPARED STATEMENT OF AUGUST SCHUMACHER, JR.

Mr. Chairman, members of the Subcommittee, I appreciate the opportunity to review the work of the Foreign Agricultural Service (FAS) and to present the President's budget request for fiscal year 1998.

1996—A RECORD YEAR FOR EXPORTS

Exporters of U.S. farm and food products posted another sales record in fiscal year 1996 in both volume and value. Exports climbed to \$59.8 billion, a gain of more than \$5 billion from the previous year. This marked the second straight year of robust trade growth. In fiscal 1995, U.S. agricultural exports surged to \$54.6 billion, up 25 percent from 1994.

With the strong, back-to-back gains of the past two years, U.S. agricultural exports in 1996 were up by some \$19 billion or close to 50 percent since 1990. In an average week this past year, U.S. producers, processors and exporters shipped more than \$1.1 billion worth of food and farm products to foreign markets, compared with about \$775 million per week at the start of this decade.

Fiscal year 1996 sales were up in two of the three major categories of agricultural exports—bulk commodities (such as grains), and consumer-oriented products (mainly foods and beverages). In the intermediate products category (semi-processed commodities, live animals and seeds), exports were off 4 percent from 1995's record level.

The overall export gains out paced the more moderate growth in imports, raising the fiscal year 1996 agricultural trade surplus to a new record of \$27.4 billion—up from \$25.0 billion in fiscal 1995. In the most recent comparisons among 11 major industries, agriculture ranked No. 1 as the leading positive contributor to the U.S. merchandise trade balance.

U.S. wood and fishery products didn't fare quite as well as agricultural products this past year. Wood product exports were valued at \$7.1 billion, off 4 percent from 1995's record. Sales of edible fish and seafood, at \$2.9 billion, were down about 10 percent. However, combined U.S. exports of agricultural, wood and fish products in fiscal 1996 rose 7 percent to a record-high \$69.7 billion.

As you can see, we've experienced solid growth in export demand as our product mix becomes more diversified and as we implement the trade agreements that have improved market access. But we have much hard work ahead of us. As domestic farm supports are reduced, export markets become even more critical for the economic well-being of our farmers and rural communities, as well as suburban and urban areas that depend upon the employment generated from increased trade.

Today, U.S. agricultural exports support about 1 million American jobs—with about one third of them in the farm sector. The other two-thirds are off-farm in processing, marketing and transportation. These jobs, on average, are higher paying than non-export related jobs.

Early forecasts of agricultural exports for the current year suggest a more moderate sales pace. In December, USDA analysts projected fiscal year 1997 exports at \$56.5 billion, down about 6 percent from 1996, but still the second highest value on record. The anticipated reduction mainly reflects increased foreign production of grains and lower average prices for wheat and coarse grains. High-value exports such as livestock, poultry and soybean products are forecast to set another record this year.

Mr. Chairman, one of Secretary Glickman's goals for the Department is to expand economic security for all of our farmers and ranchers. To do that, we have to expand economic opportunities, and increasingly, these opportunities lie overseas.

To help American agriculture tap into these opportunities, FAS works to:

- identify constraints to U.S. exports and implement strategies for overcoming these constraints;
- aggressively pursue reductions of trade barriers and trade-distorting practices on the part of key trading partners;
- provide export assistance through expanding credit, market promotion and market development beyond what the private sector could do by itself;
- ensure that U.S. farmers and our research community have information about areas of emerging foreign demand;

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- defend U.S. agricultural interests by keeping U.S. policy views before the international community;
- strengthen the export knowledge and skills of producers, processors and exporters so they can compete more effectively in the international marketplace;
- educate foreign buyers on the merits of U.S. products and how they can be purchased; and
- support economic development efforts, especially in emerging markets and developing countries.

Through these aggressive measures we are helping our farmers and ranchers meet the competitive challenges both now and in the future.

Market Access and Development

Much of our recent export success can obviously be linked to the combined effects of our trade policy initiatives, export assistance programs, and the market development efforts of FAS working with our agricultural cooperators and others, including participants in the Market Access Program (MAP). For over 40 years, USDA and U.S. agricultural producers and processors have had a unique partnership that allows us to pool our technical and financial resources to conduct market development activities around the world. When the Uruguay Round Agreement was reached, our cooperators had, in many cases, already laid the groundwork for export sales through their on-going market development activities. And in many instances, use of our export assistance programs, such as Public Law 480 and the export credit guarantee programs, had served to introduce quality American products to foreign buyers. So, in fiscal year 1996, the first full year of implementation of the Uruguay Round Agreement, U.S. agriculture was able to take advantage of the solid foundation built over the years and post some notable gains.

Pork.—For the first time, Korea opened its market for pork, both fresh and processed. As a result of the increased market access and preparatory work to introduce U.S. pork by the U.S. Meat Export Federation, U.S. pork suppliers now have a 30-percent share of the Korean processed pork market, a 10-fold increase over the token 3-percent market share for the United States in 1994. In addition, the Round enabled U.S. suppliers to crack the Korean market for fresh/chilled pork. The first U.S. container of fresh pork was shipped in September 1996 and now the product is being shipped at the rate of a container a day.

In the Japanese market, the U.S. Meat Export Federation has also been helping to pave the way for U.S. pork exporters to take advantage of increased access, despite stiff competition from Denmark and until recently, Taiwan. Several years of trade servicing, and, more recently, promotion directly to consumers have culminated in the United States capturing a phenomenal 46 percent of the market for fresh and chilled product valued at \$950 million market.

Beef.—In Korea, where the U.S. Meat Export Federation has also been active for many years, the U.S. beef industry has seen its export volume rise more than 50 percent as a result of a successfully negotiated bilateral agreement. In 1995, U.S. exporters shipped 91,000 tons of beef to Korea, capturing 63 percent of the market.

Rice.—Increased market access and the U.S. Rice Federation's success in persuading Japanese rice traders and consumers of the dependability of high quality U.S. supplies at competitive prices led to more than \$125 million in U.S. sales this crop year. This accounts for almost half of the market—up from virtually zero in 1993.

Soybeans and meal.—Capitalizing on increased market access to the Philippines, the American Soybean Association has been promoting the use of soybean meal to poultry and swine producers. Over the past two years, the value of U.S. soybean and product exports to the Philippine market has grown 122 percent to \$160 million.

In Indonesia, increased market access, reduced tariffs and the American Soybean Association's promotion of soybean meal in poultry rations helped to boost U.S. soybean meal exports from zero to 100,000 tons valued at \$20 million over the past two years.

Cotton.—Under the sanitary and phytosanitary provisions of the Uruguay Round, Guatemala changed a phytosanitary provision that had increased the cost of U.S. cotton, making it uncompetitive with cotton from other countries. To educate Guatemalan officials about the quality of U.S. cotton and the thoroughness of USDA cotton inspection procedures, FAS organized a training program for Guatemalan plant health officials. Cotton Council International's sponsorship of trade team exchanges and technical assistance have also helped U.S. exporters capture 90 percent of the Guatemalan cotton market with exports valued at \$42 million in the 1995/96 marketing year.

Feed grains.—In the Philippines, U.S. corn exporters registered about \$66 million in sales for the 1995/96 marketing year, capturing 75 percent of this once-closed

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market. The U.S. Feed Grains Council played a key role through its market development and trade servicing activities.

Fruit.—The California Table Grape Commission's technical assistance was invaluable to U.S. government negotiators in their successful efforts to gain access to the Korean fresh table grape market in 1996 and to resolve subsequent sanitary and phytosanitary barriers. U.S. grape exports for the first 10 months of 1996 were valued at \$1.3 million and are expected to grow substantially in the future as the U.S. industry works to develop the market.

The Agreement also opened the Korean market for oranges in 1995. U.S. exporters registered sales of \$5.3 million in 1995, a figure that rose to \$13.6 million in 1996. The U.S. agricultural office in Korea is projecting significantly higher sales for 1997.

Processed Products.—Tariff cuts for processed products, in some cases substantial, provided for in the Uruguay Round Agreement are expected to help boost the United States' competitive position in markets around the world. This is especially true in markets where consumers are increasingly looking for convenient, ready-to-eat food products. For example, Thailand will cut in half its tariffs on french fries, potato chips and other processed potato products. The National Potato Promotion Board, a MAP participant, has broadened its promotion activities to higher-valued items such as speciality and battered/coated fry products, resulting in significant new sales. For example, U.S. frozen french fry exports to Thailand have shown steady growth, increasing from \$2.2 million in 1994 to more than \$4.4 million in 1996.

These are just some of the gains that have come about as a result of the Uruguay Round Agreement and the willingness of U.S. agricultural exporters to devote the time and resources to develop these opportunities—a task that may take years, but one that pays good dividends when trade agreements are concluded. The Agreement represents real progress toward creating a trading environment where markets, not governments, determine the production and marketing decisions of farmers and exporters. But this Agreement is only the beginning of a process to achieve fairer trade—it is by no means the end. In 2000, we will continue the reform process and will begin negotiations for continuing the process of progressive reductions in support and protection, building on the successes of the Uruguay Round.

Bilateral Trade Issues

We also realized notable accomplishments with some of our bilateral trading partners. Working with other U.S. government agencies, we encouraged European Union (EU) and Japanese officials to decide the issues surrounding genetically modified organisms using scientific arguments. As a result, the EU approved Round-Up Ready soybeans and BT corn, and Japan approved seven new genetically modified products.

Working with USDA's health and safety agencies and the USA Poultry and Egg Export Council, we were able to preserve our largest and fastest growing markets for poultry, resolving disputes with Russia and China. Following the discovery of Karnal bunt in the southwest U.S. wheat crop, FAS, working closely with other USDA agencies, the U.S. Wheat Associates and several state wheat commissions, overcame a significant threat to U.S. exports by successfully negotiating with 33 countries and the EU on alternative phytosanitary certification procedures to keep U.S. wheat exports flowing to these countries. These markets traditionally take half of U.S. wheat exports, representing \$2-\$3 billion in annual U.S. sales.

Overseas Offices

Overseas, FAS field offices support USDA programs and the U.S. agricultural export drive in 95 locations around the globe. These offices continue to function as the "eyes and ears" for U.S. agricultural exporters, and the thousands of attache reports that they prepare each year are now available to the widest possible audience almost instantly via the Internet.

FAS has moved aggressively to adjust overseas staff in line with the Department's Long-Term Agricultural Strategy. Over the past decade, we have increased staff in the Pacific Rim and Latin America, and decreased staff in Europe. In addition, the number of foreign national staff employees working primarily on market development activities has been increased by about 5 percent.

Domestic Outreach

Domestically, FAS expanded its outreach and information efforts to educate U.S. businesses about the tremendous potential of the international marketplace. A key part of this effort is the location of export advisors at the State level—at the California, Colorado, and Oregon State Departments of Agriculture and the Iowa State Office of USDA's Farm Service Agency.

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FAS has joined forces with cooperators and MAP participants such as the American Hardwood Export Council and the American Seafood Institute, and with local entities such as State departments of agriculture across the country to sponsor export seminars for small and new-to-export business. We have enlisted the local expertise of banking institutions to help explain financing options, both those supported by FAS and other financing tools, and have asked other Federal agencies such as APHIS to help explain foreign country import requirements. The goal of these and other activities is to excite small companies about the opportunities opening to them in export markets and to educate them to ensure their initial forays into international trade are successful.

Last July, FAS, in conjunction with the Farm Service Agency, conducted outreach efforts in 47 states plus Puerto Rico. These outreach efforts were an outgrowth of the Global Attache Conference that was held July 15–19, 1996. The states hosted export events that were attended by one of USDA's 50 diplomats serving as agricultural attaches or trade officers worldwide. The events included farm and plant tours, along with an FAS presentation explaining the importance of agricultural exports to the national and local economy, global opportunities, and USDA services and programs. Over 2,000 people attended the events, bringing together producers, bankers, agribusinesses, exporters, freight-forwarders, university officials, and Federal, State and local government officials.

Cooperation and Development

In fiscal 1996, the Cochran Fellowship Program provided training in the United States for nearly 700 participants from 44 countries. A number of Cochran participants have furthered U.S. trade initiatives by, for example, assisting in resolving sanitary and phytosanitary issues in Korea, Mexico, and Indonesia. Participants from Russia, Uzbekistan, Cote d'Ivoire and China purchased U.S. agricultural commodities as a result of contacts made during their training. Many of these purchases were first-time sales to new international customers and could result in future sales as well. In addition, former Cochran participants have influenced policy within their countries. The privatization of state-collective farms and rural land mortgage systems in Russia, for example, are being implemented by former Cochran participants.

FAS' Scientific Cooperation Program supports efforts to improve the competitiveness of U.S. farmers by developing new food and fiber products; developing novel processing technologies for safe, convenient, value-added products; and developing technologies that create new products from residuals, byproducts, and wastes generated by food and agricultural production and processing operations. So far in this fiscal year, the Program has awarded 35 research projects and 15 exchange visits involving 40 different countries and representing a wide range of U.S. universities and USDA agencies. Priority subjects covered include trade barriers and phytosanitary issues, food safety, exotic diseases and pests, and biological control.

Through our programs of technical assistance, research, and training, we've conducted over 2,200 activities in over 90 countries around the world. These activities helped to enhance the competitiveness of U.S. agriculture, preserve our natural resources, and assist countries in enhancing their national food security. As part of our key role in the international effort to increase global food security, FAS led the U.S. government's intensive interagency efforts in preparation for the World Food Summit that brought world leaders to Rome last November. In partnership with the U.S. private sector and non-government organization (NGO) communities, we will continue to play an important role by following through on the U.S. commitments made as a result of the Summit.

Export Programs

Our export programs and services continue to play a key role in supporting U.S. exporters in overseas markets. FAS constantly seeks to refine and expand all of its export programs to meet changing demands of the international marketplace and keep pace with the competition. We are seeking continued budget support for these programs, which will allow us to continue to improve these export tools and reach out to additional potential exporters.

Our export credit guarantee programs provide assistance to U.S. exporters in emerging markets where the financial markets provide insufficient credit and international competitors are offering credit or subsidized commodity prices. Exporters using GSM-102 and GSM-103 export credit guarantee programs registered sales totaling \$3.2 billion for 18 countries and 5 regional markets in 1996. Mexico, our third largest export market, was the largest export credit guarantee program last year with U.S. sales totaling \$1.4 billion—or over 27 percent of our exports to Mexico. Mexico's credit repayments are fully on schedule. For 1997 we anticipate total GSM

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export credit guarantees to be about the same or slightly higher than the fiscal 1996 level.

We have launched a new export credit guarantee program—a supplier guarantee program—designed to help expand exports of processed and other high-value products. Under this program, which is a component of GSM-102, the Commodity Credit Corporation (CCC) guarantees a portion of the risk of default by an importer on short-term credits, up to 180 days, extended by a U.S. exporter. A \$50 million program has been authorized (\$30 million has been announced) for exports to Mexico, a \$10 million program announced for Guatemala, a \$5 million program announced for Jamaica, and a \$35 million program announced for Southeast Asia. Programs are also being developed for Latin and Central America and the Caribbean. Since this is a new activity, we are undertaking an extensive outreach effort to both overseas and U.S. audiences to expand the understanding of this activity. We are confident this program will help us further increase our exports of these products.

Another new program to be carried out under GSM-102 authority will be a facilities guarantee program. We anticipate publishing an interim final rule this spring for this program.

In addition, our food aid authorities—Public Law 480, Title I and Food for Progress—provided about 1.2 million metric tons of food assistance with a program value of about \$370 million to 27 countries during fiscal year 1996.

In 1997, funding for Public Law 480, including the Titles II and III grant programs, totals over \$1 billion and provides about 3.2 million metric tons of commodity assistance. This amount is sufficient to provide for anticipated programming needs and to more than meet our 2.5-million-ton commitment to the international Food Aid Convention. Within FAS, we are seeking to improve the market development impact of Title I, particularly by working with private sector entities as authorized by the Federal Agriculture Improvement and Reform Act of 1996.

In the Market Access Program, we continue to hone our allocation procedures, particularly with respect to participant contributions and export performance, to target resources more effectively to those programs offering the best prospects for success and to encourage increasing private sector contributions. The success of these efforts is in part reflected in the growth in U.S. participant and industry contributions as a share of government costs. Participant and industry contributions rose from 48 percent in 1994 to almost 54 percent in 1995, the most recently completed year. In addition, as directed by Congress, 70 percent of the resources allocated for brand promotion has been awarded to small companies or cooperatives.

Among the more promising developments in fiscal 1996 was the virtual suspension of global export subsidies, which mask market signals and distort trade. The restrained use of the Export Enhancement Program (EEP) in 1996 allowed U.S. exporters to market their products unaffected by government actions. We don't consider that current world market conditions warrant the use of subsidies by anyone. In general, U.S. supplies are relatively tight and we are exporting what we have available without the need to use subsidies. Unfortunately, the responsible restraint by the United States has been tested by renewed EU subsidization, which began in September 1996. We must be ready to protect our agricultural trade interests including the resumption of EEP, if necessary, and, therefore, have requested full funding of the EEP for 1998.

U.S. dairy exporters sold nearly 48,000 metric tons of cheeses, nonfat dry milk and whole milk powder with the help of the Dairy Export Incentive Program (DEIP) in fiscal 1996

CHALLENGES AHEAD

As you can see, 1996 was a busy year, and 1997 and 1998 promise to be just as busy as we work to build prosperity for America's farmers and ranchers. On the trade policy front, we have set our sights on 2000, when multilateral negotiations for continuing the process of progressive reductions in agricultural support and protection will be initiated. This year, we will begin to set the U.S. objectives and goals for agriculture for those negotiations.

We will also continue to place high priority on the important work done in international organizations that contribute to U.S. farm exports. This includes science-based standard setting by the Codex Alimentarius Commission, the International Plant Protection Convention and the International Office of Epizootics.

Bilaterally, the accession of China to the WTO is a top priority. We will work to ensure that we reach a commercially meaningful agreement with the Chinese, and we must resolve several outstanding sanitary and phytosanitary issues.

In addition to China, we also face both short- and long-term sanitary and phytosanitary issues with other countries as well. We continue to work with our

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trading partners through the WTO and bilaterally to address these concerns and to ensure that such import restrictions are based on sound science.

Another critical area is the trade treatment of biotechnology products. New developments in biotechnology have the potential to increase food production, lower farming costs, improve food quality and safety, and enhance environmental quality. However, the benefits for both farmers and consumers will not easily be realized without greater transparency and efficiency in the approval process.

We also continue to address issues with our partners in the North American Free Trade Agreement (NAFTA). The road is not always smooth, and a number of contentious issues remain to be addressed. Work also continues with Congress to develop fast-track legislation to begin the process by which Chile will join the NAFTA.

With our export assistance programs, we face the constant challenge of ensuring that our programs help exporters compete in the constantly changing world marketplace. For example, we are currently reviewing our operational requirements for the GSM programs, seeking ways to expand the programs' benefits to U.S. agriculture. As I noted earlier, we expect to launch another new export credit guarantee program—the facilities guarantee program—later this year. This program is designed to provide guarantees for the sale of capital goods and services that are used for the improvement or establishment of agricultural facilities in emerging markets.

We are seeking to improve the market development impact of Title I, particularly through agreements with private sector entities as authorized by the Federal Agriculture Improvement and Reform Act of 1996.

Our work with developing countries will also be challenging. These countries are important to U.S. agricultural interests now and will become even more so as we move into the next century. Two dollars out of every five that U.S. farmers earn overseas come from developing country markets, and these markets are where the biggest growth opportunities lie for U.S. agriculture. So what are we doing to focus on them? We will follow up the work begun at the World Food Summit. In addition, we will continue to use all the tools available to us—the Cochran Fellowship program, scientific exchanges and collaborative research, for example—to help ready American agriculture for the next century.

But in the end, we believe that open markets and expanded trade offer the best and surest ways to economic growth and prosperity. But just as we have targeted markets for export growth, so have other exporters, and we will continue to face stiff competition around the globe.

FAS recently completed an annual review of the export promotion activities of 22 countries that account for our major competition. The study found that just like the United States, many of our competitors have announced ambitious export goals and are reorienting their export programs to attract larger numbers of small-and medium-sized firms to exporting. The EU and other countries assist their producers and small businesses to develop foreign markets through activities similar to our Market Access Program (MAP) and Foreign Market Development (FMD) Program. Market promotion by EU countries is estimated at \$350.2 million in 1995/96, with slightly less than half of that amount provided by EU-member governments. The rest of the funds comes from producer boards and other fees. Australia, Canada, and New Zealand have strong national government promotion agencies and rely heavily on their statutory marketing boards to carry out market development activities for producers of specific agricultural products.

In addition to market promotion activities, the EU also carries out an extensive subsidy program. Of the \$9 billion budgeted by the EU in 1996 for export subsidies, over 85 percent was for exports of high-value products such as fresh and processed fruits and vegetables, wine, dairy products, and meat and meat products.

As our study shows, our competitors are not standing still. We in the United States can not stand still either. Our Long-Term Trade Strategy and the FAS Strategic Plan we are developing in accord with the Government Performance and Results Act will provide the blue print that we are and will continue to follow to identify and meet our export goals. We must continue to work aggressively to meet the competitive challenges facing us now and in the future.

FAS BUDGET REQUEST

The challenges I just described illustrate why I believe FAS must continue to play a prominent role in export expansion. Today's budget realities mean that government must be leaner and more efficient, but the era of a responsive and responsible government is not over. While there are things that government can't or shouldn't do, there are many legitimate public needs that only government can meet. Whether it's working to resolve trade disputes, supporting the American private sector as it

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battles in export markets against foreign competitors flush with funds from their national treasuries, or educating potential exporters, FAS has a vital role to play.

Mr. Chairman, in the current year FAS is continuing the aggressive approach to achieving our fundamental objective of increasing U.S. agricultural exports by 50 percent by the year 2000. With the resources provided by this Committee, FAS is expanding market development activities, including the Cooperator Program and our domestic outreach efforts, to facilitate the entry of small and medium sized producers into the export market.

Overseas, FAS is moving aggressively to adjust overseas staff in line with the Department's Long-Term Agricultural Strategy. We have recently opened an office in Hanoi, a new Agricultural Trade office in Indonesia, and an Agricultural Trade Office for the Caribbean region in Miami, Florida. Within the next few months we will open an Agricultural Trade Office in Moscow and an office on the U.S./Mexico border. By this summer, we will have augmented American staffing in Tokyo, Seoul, Geneva, and Moscow. The number of foreign national staff employees working primarily on market development activities has been increased by about 5 percent.

While maintaining necessary activities in mature markets, we will continue to look for ways that we can strengthen USDA's presence in areas of the world that are experiencing the most rapid development and changes.

We believe the future offers continued opportunity for the expansion of U.S. agricultural exports. Strengthening our ability to compete globally has the direct payoff of increased farm income for America's farmers and ranchers and the continued economic development of rural communities.

The world marketplace is intense and our competitors are upping the stakes. For example, in fiscal year 1996, FAS expenditures for all activities: export promotion, trade servicing, FAS personnel and operating costs—everything—was less than the European Union spent that year just to subsidize its barley exports.

Mr. Chairman, the fiscal year 1998 FAS budget proposes a direct funding level of \$150.9 million and 885 staff-years, an increase of \$15.4 million above fiscal year 1997 funding levels. The activity structure of the fiscal year 1998 FAS budget reflects implementation of the Government Performance and Results Act and transition to a performance-based management system. In this regard, FAS has adopted a new budget activity structure that incorporates the policy objectives of USDA's Long-term Agricultural Trade Strategy.

Significant proposals by policy objective include:

Strategic Outreach and Market Intelligence.—The 1998 President's budget proposes that funding for the operating costs of the CCC Computer Facility and other, related FAS information Resources Management costs, which in the past have been funded through a reimbursable agreement with CCC, shall be funded through the FAS appropriation. This change will shift funding for these activities from mandatory to the more appropriate category of discretionary spending. Also, future funding for these activities will no longer be subject to the annual limitation on CCC reimbursable agreements established by provisions of the 1996 Farm Bill.

The total of the Computer Facility and other IRM costs is estimated at \$9.7 million in 1998. The budget provides increased funding of \$4.0 million to partially meet these costs; the remaining \$5.7 million will be met through a reduction in marketing programs carried out through the ATO's and increased cost-share contributions by participants in the Cooperator Program.

Market Access.—The budget includes an increase of \$500,000 to implement a systematic process to review, identify, and catalog technical barriers to trade and other technical requirements that limit export opportunities for U.S. agricultural products in the top 30 U.S. export markets. The review will lead to recommendations for overcoming the identified barriers to expanded U.S. agricultural exports to these markets. These markets account for the majority of U.S. agricultural export trade. The catalog will include codified and non-codified information from the various governmental agencies regulating or affecting imports in these major markets.

Long-term Market Development.—The 1998 President's budget proposes that technical assistance activities carried out under the Emerging Markets Program and authorized by section 1542(d) of the 1990 FACT Act be funded through FAS appropriations rather than through CCC funds made available to FAS under a reimbursable agreement. This change shifts the costs of these activities from mandatory to discretionary spending, but funding will remain at the currently authorized level of \$10 million annually, which corresponds to provisions of its authorizing statute. The fiscal year 1998 budget also proposes to continue the Cochran Fellowship Program at the fiscal year 1997 level of \$2.4 million.

The budget also includes new provisions to address the difficulties in accurately estimating and funding wage and price increases associated with the operations of our overseas Counselor, Attache and Trade Offices. First, the budget provides an ad-

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vance appropriation of \$3 million for fiscal year 1999 to fund documented wage and price increases and/or exchange rate losses incurred during fiscal year 1998. Second, in conjunction with the advance appropriation, the budget proposes that funds appropriated to FAS in fiscal year 1998 be available for obligation through September 30, 1999.

EXPORT PROGRAMS

Mr. Chairman, the commercial export programs we administer are expected to grow in importance as the market-opening provisions of the Uruguay Round Agreement are implemented. Our program proposals provide the tools to meet these new sales opportunities, tempered by the need to reduce Federal spending.

For the export credit guarantee programs, the budget proposes a total program level of \$5.7 billion. This includes \$5.3 billion for the GSM-102 program and \$400 million for the GSM-103 program. As part of the GSM-102 program, the budget includes \$350 million for supplier credit guarantees and \$100 million for our new facilities financing guarantees. We are continuously looking at ways to use this guarantee authority to meet changing market needs.

To provide a partial offset for a high priority supplemental appropriations request for the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), a \$50-million rescission of budget authority is proposed for Public Law 480, Title I. This proposal will reduce the Title I program level by \$60 million and estimated commodity shipments by 200,000 metric tons. This proposed reduction does not change the country allocations already announced.

For 1998, the budget provides a total program level of \$990 million for Public Law 480 foreign food assistance, a reduction of \$57 million from the revised estimate for 1997. The reduction in Public Law 480 funding proposed for 1998 will occur in the Title I program; funding for Titles II and III will remain largely unchanged from 1997 enacted levels. The 1998 request level is expected to provide total estimated shipments of Public Law 480 commodities of 3.2 million metric tons, unchanged from the revised tonnage estimate for 1997.

The 1998 President's budget shifts the budget and expenditures for the Public Law 480 Title I credit sales program from the International Affairs Function (Function 150) to the Agriculture Function (Function 350) of the Federal budget. Provisions of both the 1990 and 1996 Farm Bills have redirected the focus of the Title I credit sales program to place far greater emphasis on its market development objectives. With these changes, the importance and role of the Title I program in the Department's overall long-term market development strategy has increased. As a result, the Department strongly believes that the Title I program should be managed and budgeted as a part of a consistent package of agricultural export programs. Because all other USDA export programs are included in the Agriculture Function of the budget, the Title I program should be included in that Function as well. In addition, this shift in Title I to the Agriculture Function will not affect the overall level of U.S. foreign food aid efforts because Title I program activities will continue to contribute to U.S. international food aid commitments.

For the Market Access Program, the budget proposes a program level of \$90 million for fiscal 1998, the maximum program level authorized by the FAIR Act, and unchanged from fiscal year 1997.

For our subsidy programs, the proposed levels for EEP and DEIP allow for changed market conditions and provide the necessary tools to respond to other governments' actions. Program activities in fiscal year 1996 were much lower than in previous years due to world market conditions. The budget provides \$500 million for EEP, the maximum level established by the 1996 Farm Bill and \$89 million for DEIP in anticipation of higher sales under this program.

This concludes my statement, Mr. Chairman. I will be glad to answer any questions.

PREPARED STATEMENT OF KENNETH D. ACKERMAN

Mr. Chairman and Members of the Subcommittee, I am pleased to present the fiscal year 1998 budget for the Risk Management Agency (RMA), which supervises the Federal Crop Insurance Corporation (FCIC). It is my privilege to appear before you as Administrator of the newly formed Agency.

Farmers today face a risk environment dramatically different from that which existed a few years ago. In 1996, Congress enacted the Federal Agriculture Improvement and Reform Act (1996 Act), which is designed to strengthen the Federal crop insurance program by giving American farmers much improved and expanded risk management tools, as well as education programs that will enable them to make

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more informed decisions. However, this Act and previous legislation changed the landscape of American agriculture by phasing out the traditional Federal programs that have provided a safety net to farmers for price and production risks over the past 60 years. Deficiency payments and ad hoc disaster aid have been eliminated, and a variety of other price and production assistance programs have been significantly reduced. To fill this void, producers today must take active steps to reduce their agricultural risks. They must rely on an increasingly wide and sometimes confusing array of risk management products being offered primarily by or through the private sector.

RMA plays a pivotal role in fulfilling the mandates of the 1996 Act while assuring that American agriculture remains solid, solvent and globally competitive into the 21st century. To accomplish these tasks, RMA intends to refine existing products, create innovative, cost-effective tools, educate the public, and expand its partnerships with the agricultural community.

ORGANIZATION, SIZE AND LOCATION, AND FIELD STRUCTURE

Provisions of the 1996 Act required the Secretary to establish an independent office responsible for supervision of FCIC, administration and oversight of programs authorized under the Federal Crop Insurance Act, and development of programs involving revenue insurance, risk management savings accounts, and other programs designed to help producers manage risk and support farm income. Consequently, RMA was established as an independent entity in April of 1996. The more than 22,000 county crop programs are formulated, implemented, and monitored in coordination with the RMA headquarters office located in Washington, D.C., and the national operations office in Kansas City, Missouri. The programs are administered in the field through ten Regional Service Offices and six Compliance Offices. As of September 30, 1996, there were 536 employees in RMA.

INITIATIVES AND GOALS

Revenue Insurance Products

In fiscal year 1996, RMA witnessed a strong response from commodity groups, producers, and insurance agents to revenue insurance products which are designed to help producers manage both price and yield risks. In the post-1996 Farm Bill environment, American farmers need such programs to manage risks with confidence and security. The demand for these products highlights the importance of private sector alternatives in the risk management environment and reflects producers' awareness of their individual responsibilities in managing risks.

For fiscal year 1998, RMA intends to improve the safety net for farmers by seeking authority to make revenue insurance available nationwide. RMA anticipates this will increase purchases of risk management tools by farmers, resulting in greater Federal outlays. To be cost neutral, the additional delivery expenses paid from the discretionary fund will be offset by reducing the reimbursement rate used to determine administrative expenses paid to reinsured companies. RMA also proposes to reduce the overall program loss ratio to offset the mandatory account costs of producer premium subsidy and a portion of the expense reimbursement.

Risk Management Education

In the new risk environment, RMA must not only provide producers with new tools to manage their risks, the Agency must also educate producers on the wide array of risk management tools which are currently available. In the past 3 years, Congress has adopted two provisions mandating the Department of Agriculture to establish a crop insurance/risk management education program geared toward orienting farmers about the wide array of risk management products.

Accordingly, RMA, in conjunction with the Cooperative State Research, Education and Extension Service and the Commodity Futures Trading Commission, has developed a plan to conduct and evaluate a risk management education program based on a coordinated team effort of Federal agencies and private groups. Our goals in pursuing this educational effort will be to (1) develop training programs for farmers which integrate basic information on risk management from all relevant sectors (such as insurance, futures and forward contracting) and (2) provide a source of up-to-date information on new risk management products that farmers and agricultural advisors across the country can use when confronted with decisions, questions and solicitations. The delivery system for this program will rely primarily on the private sector, including not just the crop insurance industry, but also the futures industry, the farm lending community, and farm and commodity organizations. Costs for this initiative will be paid to the maximum extent possible by the FCIC insurance fund.

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Renegotiation of Standard Reinsurance Agreement

Given the dramatic changes to the crop insurance program and the diverse and expanded role of RMA, we elected this year to renegotiate the Standard Reinsurance Agreement (SRA) which governs the relationship between RMA and the 17 private insurance companies participating in the reinsurance program. Since 1994 when the SRA was last renegotiated, the crop insurance program has more than doubled in size in terms of policies sold, acres covered, and premiums collected. Today, crop insurance sold and serviced through reinsured companies accounts for nearly 74 percent of the total number of policies and 89 percent of total premiums.

Renegotiating the SRA will allow RMA to systematically resolve a wide range of issues. For instance, preliminary analysis suggests that the current SRA formula provides participating companies with too large an opportunity for financial gain compared with the underwriting risks which they bear. Questions have been raised regarding the methodology of providing administrative expense reimbursement (AER) to participating companies. Preliminary findings by the General Accounting Office suggest that although the current AER is set at 29 percent of net book premium, companies are actually spending between 25 and 27 percent of net book premium on actual program-related administrative expenses. The budget contains a discretionary spending reduction of approximately \$53 million in AER payments by proposing both a lower AER and providing for 10.5 percentage points of the reimbursement rate to be discretionary spending.

FCIC FUND

Under current law, the budget for the FCIC Fund proposes an increase of \$14 million in premium subsidy for policies with buy-up coverage. For catastrophic risk protection, an additional amount of \$7 million in premium subsidy over the 1997 crop year will be required. This recognizes that indemnity payments for crops planted in the 1997 crop year will continue to be paid in the 1998 fiscal year. Under proposed legislation, there would be an additional estimated increase in buy-up coverage subsidy of \$25 million.

Under current law, the budget also includes funding for \$257 million in mandatory account spending to reimburse the reinsured companies for the delivery of limited and buy-up coverage. This is a decrease from 1997 due to the legislative mandate that a portion of administrative expenses paid to the reinsured companies be transferred to the discretionary account. Under proposed legislation, it is estimated that an additional \$10 million in administrative reimbursements to reinsured companies would be required.

ADMINISTRATIVE AND OPERATING EXPENSES

Under current law, discretionary account expenses have increased by \$207 million from the fiscal year 1997 level. This increase is a result of sales commissions estimated at \$203 million which will be reimbursed to reinsured companies and paid from discretionary funds; increases of \$465,000 for a portion of the estimated pay increase and annualization of the fiscal year 1997 pay raise; and \$4 million for an increase in full-time equivalency positions. Under proposed legislation, the discretionary portion of the administrative reimbursements paid to reinsured companies, no longer just for sales commissions, is estimated at \$150 million which reflects a savings of \$53 million.

Staff levels for RMA have decreased dramatically in recent years as the program has grown in size, scope, and expectations. Overall staff resources, including administrative resources from the Farm Service Agency, have been reduced by more than 20 percent since 1993. The modest growth in staff positions proposed here is intended to adjust for recent losses and to improve our ability to service participating private sector companies. Funding for implementation of the reform costs for the new and expanded programs will increase to assure that the programs are implemented as expeditiously as possible.

In closing, I appreciate the opportunity to outline the many positive initiatives that RMA has taken to improve the crop insurance program and to discuss some of the programs being proposed. Mr. Chairman, this concludes my testimony. I will be happy to answer any questions that you may have.

EXPANSION OF CROP INSURANCE

Senator COCHRAN. I notice that in your prepared statement, on page 2, you make the observation that you have expanded and im-

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proved programs to help producers manage their price and production risks. My question is, how have you done that?

Mr. SMITH. Mr. Chairman, much of the work in this area has been done with our risk management programs and our revenue insurance-type programs. I would like to ask the Administrator of our Risk Management Agency, Mr. Ken Ackerman, to expound on that.

Mr. ACKERMAN. Thank you, Mr. Chairman.

Very briefly, in the past 2 years, we have expanded the traditional Federal Crop Insurance Program from simply a production risk-based program to now, in many parts of the country, include price risk, as well, through revenue insurance products. There are three basic revenue products that are now being offered in different areas of the country on an experimental basis: crop revenue coverage, income protection, and revenue assurance.

We anticipate that, over the next several years, sales of these products will increase probably nationwide. We have submitted a legislative proposal to that effect.

EXPENSE REIMBURSEMENT IN DISCRETIONARY FUNDS

Senator COCHRAN. Is there a request now pending in the Congress from the administration to provide up to \$200 million additional funding for this increased protection for producers?

Mr. ACKERMAN. The request for \$200 million is an existing request. It is not new money. The change this year is that for 1995, 1996, and 1997, the delivery expense of reinsured companies for delivery of Federal crop insurance was paid for fully on the mandatory side of the budget. This year, a portion of the delivery cost is funded from the discretionary side. The split is part of a compromise, essentially, that was worked into the Crop Insurance Reform Act of 1994.

We have proposed a reduction in that amount to help ease the burden. We are proposing that the expense reimbursement to the companies be reduced from 28 percent of premium down to 24.5 percent. That would reduce the number you referred to from \$200 million down to about \$150 million.

Senator COCHRAN. Thank you.

FARM CREDIT FUNDING LEVELS

Mr. Secretary, on page 3 of your statement you mention the trend is emphasizing guaranteed loans to farmers and, I am assuming, in order to get away from direct lending. My question is, Why do you request less money for the guaranteed loans in the next fiscal year's budget than the current fiscal year and more money for direct ownership loans?

Mr. SMITH. One of the focus areas of our direct ownership loans is beginning farmers and socially disadvantaged farmers. We are focusing the direct loans in that area. Our guaranteed loan program is the major growth area and one of the areas in which we have historically experienced the fewest delinquency problems.

I would like to ask Randy Weber, the Acting Administrator of the Farm Service Agency, to expound on that, as well.

Senator COCHRAN. Randy, go ahead; proceed.

Mr. WEBER. Yes, Mr. Chairman.

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In 1997, we have a subsidy to support direct farm ownership loans of \$28 million. Under the 1998 budget, we are requesting subsidies that would give us authority to loan approximately \$31 million—a slight increase there. However, under the direct farm operating loans, the projected loan level is down about \$20 million from this year.

The activity with regard to 1997 is quite brisk right now, and we are likely to run out of direct operating loan money earlier this year than we normally do. We are looking right now at sometime in May.

Senator COCHRAN. Will there be a supplemental request made by the administration for that account?

EMERGENCY FUNDING

Mr. WEBER. We are working on that effort right now, yes.

Senator COCHRAN. I have one other question, then I am going to yield to my colleagues for any comments or questions that they may have. On page 7 in your statement, Mr. Secretary, you say that no funds are requested for the Emergency Conservation Program. This is a disaster assistance program. That caught my eye, in view of the fact that we have had a lot of disasters that have occurred, that have affected agriculture producers.

I notice you suggest that there is a \$5.8 billion contingent reserve that the administration wants to establish for emergency requirements. Now, I am concerned about that part of the request. I wonder how we maintain our accountability to the taxpayers in the appropriations process if we make available a huge amount of money to the administration without any guidance or restrictions as to how it is spent. The President can just declare an emergency or declare that this was the result of a disaster and spend it for whatever the administration wants.

Under this proposal, how would we guarantee that some of that \$5.8 billion will go to agriculture producers or landowners under the authority of existing statutes that provide for these programs?

Mr. SMITH. Mr. Chairman, historically, for the Emergency Conservation Program, the budget has not asked for funding in advance, because it is very difficult to predict what experience we are going to have in the area of a natural disaster. Historically, this program has been funded through supplementals.

In fact, we have an ECP supplemental request that has been submitted to Congress for \$20 million, plus a contingency reserve of \$17 million, to accommodate current need. So the fact that we do not have funding proposed in the 1998 budget is consistent with this past practice.

Under the proposed \$5.8 billion contingency reserve for emergency funding requirements, we have the Emergency Farm Loan Program that is part of our safety net, in addition to ECP. And there are continuous needs that are difficult to predict in advance for a particular program.

We are currently experiencing considerable problems with livestock in the Dakotas and in Minnesota due to the weather damage there. Historically, our largest programs have focused on the commodity side, in terms of a safety net.

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Different disasters have different characteristics, and in order to have broad discretion in how to deal with these disasters, we are proposing to have a contingency fund that is not necessarily earmarked for a specific use.

I would like to ask Mr. Kaplan if he would care to expand from the budget perspective on that.

Senator COCHRAN. Mr. Kaplan?

Mr. KAPLAN. My understanding is that OMB would talk to the appropriate committees of Congress before any money is released out of that emergency fund, so that you would have some impact on how the money is spent.

Senator COCHRAN. Is there any predetermined percentage that would go to any kind of disaster?

Mr. KAPLAN. No, sir.

Senator COCHRAN. I see. Well, that is not going to happen, is it?

Mr. KAPLAN. No, sir.

Senator COCHRAN. I do not think it is going to happen. [Laughter.]

Senator BURNS. Do not be so optimistic. [Laughter.]

FSA COUNTY EMPLOYEES

I guess I would just like to submit my statement, Mr. Chairman. I do not have very many questions, other than the fact that we sort of have a concern among our farmers in Montana, of trying to make your farm service agent in the local city an employee of USDA, rather than a member of the committee. They are a little bit nervous about that. Are you still going forth with that program?

Mr. SMITH. Senator, it is one of the proposals that we have under consideration within the Department. When we reorganized in 1994, and we pulled several functions, such as the old Farmers Home programs and the old ASCS programs into the same office for administration, we moved Federal employees at the county level and non-Federal employees into the same offices. Under the law, we cannot have a non-Federal employee supervising a Federal employee.

Senator BURNS. I think that is the best of all worlds, just personally speaking.

Mr. SMITH. And we now have functions at the local level that are being administered by both Federal and non-Federal employees.

In order to gain efficiency in terms of our service centers and be responsive to the needs of our producers in those areas, we are looking at this proposal as one way to gain that efficiency, by having just one category of employee right down to the county level.

USE OF CRP FUNDS FOR CROWN BUTTE

Senator BURNS. One area that really caught everybody's attention is using CRP funds for Crown Butte. Anybody want to make a comment on that—where that is?

Senator BUMPERS. Yes; I would like to comment. [Laughter.]

Senator BURNS. I suspect you would.

There is a lady out there that owns that land where you do not want her to mine. She would kind of like to have the same amount as the gold company got. She wants \$65 million, too. Do you want to take that out of CRP?

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Senator COCHRAN. Direct your questions to the witnesses.

Senator BURNS. Oh. [Laughter.]

Where is that? I have a hard time justifying that with my farmers. This was a decision that was made by this President. And I do not feel that that money should come from American agriculture or be taken out of agriculture to justify this action.

Mr. SMITH. Senator, I am not an expert on budget reconciliation and budget caps and things, but it is my understanding that the decision to use part of the CCC funding for CRP will in no way impact our ability to enroll the acreage that is authorized under the CRP program. We do have Dennis Kaplan here as an expert, and I would like to ask Dennis if he has a view on this.

Senator BURNS. He is about 10 degrees off plumb. [Laughter.]

Mr. KAPLAN. I am not an expert by any means. But all the proposal would do would be to delay the signup of 2 million acres for 1 year. Funds would not be taken out of CRP. Instead, the signup of 2 million acres would be postponed from 1997 into 1998. No money is going to be taken out of farmers' pockets under the proposal.

Senator BURNS. OK. Well, I do not think any of it should be used. And I would be very disappointed if it was diverted from the CRP to buy out this mine to keep them from mining up there. I find this very interesting the way they have proposed to do this.

ANNOUNCEMENT OF ACCEPTED CRP ACRES

Another thing in your CRP—of course, you all are not in the policy business, but on the CRP thing, do you think you can complete all of the applications for CRP by the middle of June or the end of June that are coming in now? Can the completions be made?

Mr. SMITH. Well, we were very pleased at the work of our county offices and the cooperation that we have had between the Natural Resources Conservation Service employees and the FSA employees at the local level, to get the producers in and get their bids into the system during this signup. And we feel pretty sure that we will also be able to go through the analysis within the allotted time period and announce the accepted acres before the middle of June.

I would like to ask Randy to just give us an update as to what the agency foresees.

Mr. WEBER. Senator Burns, this week and last week, the counties along with NRCS are looking at the documents they received and are completing. We had some States in which they had a register after the 28th. So we have spent last week finalizing all of those documents.

Everything seems to be on track right now, and we are hopeful that all of the records will be submitted to Washington at the end of next week. We then will begin the review process. At this point, we currently are having some problems in North Dakota and Minnesota because of the weather, and we may have some slight delays there. But we generally think we are going to be able to meet the deadline, and hope to have announcements out to farmers before June 15.

Senator BURNS. Mr. Weber, I do not have to tell you that this is really time sensitive.

Mr. WEBER. We fully understand that.

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Senator BURNS. We could lose a crop.

Mr. WEBER. Yes.

Senator BURNS. We could completely lose a crop in the State of Montana and the northern tier, especially on our spring grains. And I think the way you are approaching this thing is going to, as far as the conservation acres, you are going to be disappointed in the fact that there is a lot of these people—the intention to take some of those marginal acres out of production, which I fully support, I think we are going to find just the opposite may happen, whenever we see the bids and the acres taken out and the way they can track or chop up a man's farm.

I hope I am wrong. I just hope I am wrong. But you have probably heard that before, though.

Mr. WEBER. We have heard those concerns. But the preliminary data that we have gotten in is very good.

Senator BURNS. Well, I am very hopeful then. I am going to give you the benefit of the doubt.

Mr. WEBER. I am hopeful that your concerns are not going to be a reality.

Senator BURNS. Well, I hope you are right and I hope I am wrong. And I still stand corrected. But I am just afraid it may go the other way. It sure could awful easy. And I think we are time sensitive. And I will tell you, I will fight like a bearcat to take any CRP out of agriculture to pay a bunch of miners on that little deal. I will just fight like a bearcat. I ain't going to die in the ditch, but I will fight.

And here is my statement. Thank you.

PREPARED STATEMENT

Senator COCHRAN. Senator, we will make your statement part of the record in full. Thank you.

[The statement follows:]

PREPARED STATEMENT OF SENATOR BURNS

Thank you, Mr. Chairman. I appreciate you calling this hearing today.

We have all, just in the past few days, returned from our States. If you had any kind of break like mine, I am sure you got an earful of the concerns which are facing our farmers in the field this year. Many of the concerns I heard about, were based on the actions of the Farm and Foreign Agriculture Services.

The concerns which were shared with me in various locations around Montana, dealt with the way that the Department of Agriculture deals with them as producers. These concerns are based upon what the producer perceives as the future for his way of living. Our American agricultural producer is concerned about what they see as the trend in the Department of Agriculture to remove their local control over a variety of issues and circumstances.

The chief among the questions asked of me, during the past two weeks, was why does the Department of Agriculture want to close their local Farm Service Agency office. Although I am not sure that any in Montana have been slated for closure, the word on the street is that there are offices that are going to close. With this in mind the local person begins to get the idea that it is their office. I must admit, I am sure that there are areas in this country where we have offices very close together and that there is a way that we could remove some duplication. However, in rural western America, I am not sure that this is what we need.

When people have to drive hours as it is to reach their local USDA office, they cannot understand why they will be asked to drive even further in the future. It is their understanding that you are there to help them and to make their life in relation to farm programs easier.

I have stated for all the years that I have been in this town that if we are going to reduce the Federal work force, that the first and most logical place to look is in

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Washington. We have an abundance of personnel downtown here who duplicate the jobs of others in the workplace at the Department of Agriculture.

One of my own personal key concerns deals with the thought that the Department wants to make the local Farm Service agent a Federal employee, and take control of that person out of the local decisionmaking process. These people are, at this time, obligated to answer to the local committee and as such really respond to the needs of the local citizenry. If these people are made Federal employees, they lose this incentive to respond to the needs of the people in their local community. We are left with another level of bureaucracy in a time when we already have too much of it. The role of this government, in these times, should be to make government more localized for the agricultural producer.

I have heard concerns also about the manner in which we are marketing our agricultural products in the foreign marketplace. The producer is concerned about the way in which our competitors are able to get the upper hand on us in so many deals. One thing that Congress heard loud and clear last year, was that get government out of our daily operation and we will be able to make a decent living on the farm. They also asked that we provide them with the tools to enable them to market their production in the world marketplace. Well, Congress did that, but the producer is still concerned about the way that their products are being marketed in the global economy. I share many of their concerns.

Finally, we come to the issue of crop insurance. The producer in Montana is well aware of the perils that face them on a daily basis. Because of this understanding, they have been willing participants in the program. They have worked with my office and with the Federal Crop Insurance program to implement changes for the benefit of all producers in this country. They still see a need for additional changes, but overall they are pleased with the performance of the program.

Mr. Chairman, I look forward to listening to the panel today, to hear about what they foresee of the coming year in their program areas. I hope that they will provide the committee with some explanation of the reasoning for the changes that they are instituting at both the national and local levels.

Thank you, Mr. Chairman, I will have some questions later for the panel, and I may submit some afterward for written answers.

CROWN BUTTE

Senator COCHRAN. Senator Bumpers.

Senator BUMPERS. Mr. Chairman, I wanted to ask Senator Burns, is the woman you refer to, is she, the landowner, expecting royalties?

Senator BURNS. Yes.

Senator BUMPERS. Do you know how much?

Senator BURNS. I do not know how much.

Senator BUMPERS. I would be willing to vote to give her the same amount of royalties you vote to give the United States from mining on Federal lands every year.

Senator BURNS. I would do that. We can make a deal.

Senator BUMPERS. That is zero.

Senator BURNS. I will take it. That is more than I have got now.

Senator BUMPERS. I am talking about the woman who owns the land, expecting royalties. Do you know what her contract provides for?

Senator BURNS. We will talk about this over coffee sometime.

Senator BUMPERS. You have always voted to keep the 1872 mining law going, which allows the biggest mining companies in the world to mine 3 billion dollars' worth of gold a year and not pay the Federal Government a dime for it. So I thought we might treat this woman the same way.

Senator COCHRAN. Senators, I am going to call the committee to order. [Laughter.]

Senator BUMPERS. Mr. Smith, how many Under Secretaries do we have down there that are acting? [Laughter.]

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Senator BURNS. About one-half of them.

Senator BUMPERS. I believe there are three Acting Under Secretaries and one Acting Assistant Secretary.

On the Conservation Reserve Program, Senator Burns has raised a concern that all of us share who come from agricultural States—about using Conservation Reserve money. Now, I want to get rid of Crown Butte Mining Co. very badly. I will do almost anything, short of mayhem, to keep them from mining that land outside Yellowstone. And my staff tells me that the effect of this would be to delay the use of CRP money by 1 year—\$65 million for 1 year—is that correct?

Mr. KAPLAN. Yes, sir; that is correct.

Senator BUMPERS. You are the expert on this, Mr. Kaplan?

Mr. KAPLAN. Again, I am not an expert, but I am involved a little bit. [Laughter.]

TENTATIVE CRP SIGNUP RESULTS

Senator BUMPERS. Let me put it another way. How many acres would we sign up under CRP this year that we would not be able to sign up if we give \$65 million to get rid of Crown Butte?

Mr. KAPLAN. Our budget has proposed to sign up 19 million acres this year. So we would only sign up 17 million acres rather than the 19 million that is in the budget.

Senator BUMPERS. Of the 19 million you are prepared to sign up this year, 14.7 million of that is old acreage, is it not—contracts that are expiring? I think that is what you said in your testimony, Mr. Smith.

Mr. SMITH. The latest information, which became available after I submitted my statement, shows that about 18 million of the 26 million acres that have been offered are currently enrolled.

Senator BUMPERS. So the effect of this would be—I mean there is some damage to the farmers, who may be anticipating—you have got 20 million—you said in your testimony also that there are 20 million acres in applications right now to take up this 19 million that you propose to enroll, is that right, Mr. Kaplan? So you already have enough applications to fulfill the 19 million?

Mr. KAPLAN. Yes, sir.

Mr. SMITH. We now have approximately 26 million applications as a result of the signup.

Senator BUMPERS. You do not mean applications?

Mr. SMITH. I am sorry?

Senator BUMPERS. You do not mean 26 million applications; you mean 26—is that what you are saying, 26 million applications?

Mr. SMITH. No, sir; we had 26 million acres bid during the signup period, of which about 18 million are acres that are currently in the CRP. And those contracts will be expiring September 30 of this year.

Senator BUMPERS. Maybe I should submit a question in writing to you, asking for detailed information on what the effect of taking \$65 million—is it your information that we would use that \$65 million this year to cut this deal with Crown Butte?

Mr. SMITH. My statement is that we do not believe that it will affect our ability ultimately to enroll the full 36.4 million acres in the CRP over the duration of the program. I will point out that the

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26 million acres that were bid were out of a pool of about 230 million eligible acres. There were about 230 million acres that we felt were environmentally sensitive and eligible to be offered by producers into the CRP. So out of that pool we had 26 million acres offered.

Now, as we go through and evaluate these offers, the acceptable offers may yield fewer than the 19 million acres that we had in the budget baseline. If the acceptable offers fall below the 17 million acres, there would be no impact from a decision to use part of the CRP funding for the mine.

If the acceptable offers were to reach above the 17 million, it would simply delay the enrollment of the additional acres for 1 year.

Senator BUMPERS. What is the average cost per acre on CRP per year?

Mr. WEBER. It currently runs about \$50 an acre.

Senator BUMPERS. \$50 an acre per year?

Mr. WEBER. Yes; that is what the annual rental payments are.

Senator BUMPERS. Now, Mr. Smith, you stated in your testimony that you have a new program of allowances on CRP, which you think will reduce your cost by \$25 million. Do you remember saying that in your testimony? For example, haying and grazing; you allow haying and grazing.

Mr. SMITH. Yes, sir.

Senator BUMPERS. How will that reduce the cost of the program?

Mr. SMITH. Normally, when we implement haying and grazing, it is on the basis that the producers forfeit a portion or all of their CRP payment. So this would be a savings, to the extent that we permitted the haying and grazing.

MARKET ACCESS PROGRAM

Senator BUMPERS. OK. You may or may not know that the old Market Promotion Program was one of my favorite programs. I tried to kill it for 6 years and have not gotten it done yet. Why did you change the name of the Market Promotion Program to the Market Access Program?

Mr. SMITH. Let me ask—

Senator BUMPERS. I want to ask everybody why you change the names of all these programs every 6 months. [Laughter.]

Just about the time I get used to the acronyms, they are all changed again.

Go ahead, Mr. Schumacher.

Mr. SCHUMACHER. Senator, thanks for your question.

We have made quite a few changes in that program over the last 2 or 3 years—working with Congress. We basically eliminated most of the funding for the large branded companies. We are phasing them out. Next year there will be no money provided to any firm that does not meet the SPA guidelines.

This year no money is provided directly, and we have phased down the indirect funding to about 4 percent of the total program. It is rather a different program, focusing on cooperatives, medium and small enterprises, to meet some of the vigorous competition that is coming from Europe and even the southern cone, in Chile and other areas.

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Senator BUMPERS. Mr. Schumacher, let me give fair warning. I am not going to get into it now, because you really have not had enough experience under the new mandate of Congress on this program. Senator Bryan and I, last year—you are operating under the amendment that we got adopted last year—of making people put up—cost-share. Also, limiting it to small businesses and co-ops and things like that.

In Mr. Smith's testimony, he stated that the program had been very effective. But I think I got the impression that it has been effective in dispersing the money. What I want to know is how effective is it in accomplishing the goals that we have set for spending the money? In other words, how is it enhancing—if it is in fact enhancing—our exports? And how is it helping small business people to export?

Now, as I say, you have not had enough experience yet to really give a good answer to that question. But we oftentimes—these hearings are not only to review the budget, but they are oversight hearings to determine how well these programs are working so we can set the budget. But, next year, I would like to see some definitive numbers on what we are getting for our money. Are we actually increasing exports? And is this program—how is this program working? And is it effective, so far as increasing exports are concerned?

U.S. AGRICULTURAL EXPORTS

Which brings me to my next question. Why—you state that you expect exports to be down this year, from \$59 billion—you think it is going to be down around 6 percent—is that about right?

Mr. SCHUMACHER. \$56.5 billion is the current forecast.

Senator BUMPERS. From \$59 billion?

Mr. SCHUMACHER. \$59 billion.

Senator BUMPERS. And you state that one of the reasons for that is because of the increased yields in crops that some of the people that we export to are experiencing; is that correct?

Mr. SCHUMACHER. Many of our importing countries had very good crops—Argentina, Australia—have record crops on wheat. We had a light crop on wheat last year. Prices have come down.

Senator BUMPERS. Well, how much impact is the increased price of commodities having, if any?

Mr. SCHUMACHER. I do not understand the——

Senator BUMPERS. Well, let me—corn and wheat are both considerably higher now than they were, say, 1½ or 2 years ago. Is that a factor in reduced exports, or is it just the fact that these other people are doing better in their own agricultural programs?

Mr. SCHUMACHER. On the——

Senator BUMPERS. The importers.

Mr. SCHUMACHER. On the bulk, we have come down on wheat and corn in price and some volume. We had record corn exports—55 to 56 million tons in 1994–95. But then the prices, of course, as you recall, were very, very high in many of the bulk commodities last year. Price had quite an effect reaching the \$59.5 billion export level. We originally forecast a drop in 1997 mainly on the bulk, with value-added moving very, very nicely—mainly meat exports.

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We have increased our projection to \$56.5 billion because of the expected increase in value-added. And we are looking forward to seeing how we make out with the difficulties that Taiwan has had in its aftosa outbreak in Japan. We may see an additional increase as our pork industry gears up to meet the Japanese demand.

So we think we are doing well—very well—in value-added. That is sort of like the Energizer Bunny. It just keeps going and going and going. But the bulk has been more volatile.

There is one issue, though, I would like to bring to the committee's attention. And that is, as we look at our corn and soybean exports, one thing we have not focused on as much as I think we should is the amount of corn and beans that is going to meat. Let us assume we will do 48 million tons this year of corn. But we will probably do another 9 or 10 million tons in corn, through poultry, pork, and beef. And that was not there when we hit our record exports of corn, of 61 million tons, in 1981.

Senator BURNS. Do you want to explain that again?

Mr. SCHUMACHER. Yes, sir; this year we are forecasting 48 to 49 million metric tons of corn to be exported. In 1980–81, we hit our record of 61 million metric tons of corn that were exported from the United States. But back then, we were not exporting the amount of meat that we are exporting now.

Senator BURNS. Oh, OK.

Mr. SCHUMACHER. So if you look at the amount of meat that is going out, factor in the standard conversion ratios, we are hitting 9 or 10 million value-added tons that is staying here creating jobs and employment. This then effectively brings the total amount of corn fairly close to that record, and will exceed that if we continue the very strong meat exports that we have been seeing in the last few years. We expect those—

OUTLOOK FOR MEAT EXPORTS

Senator BUMPERS. Meat exports are climbing?

Mr. SCHUMACHER. They are doing very well, with poultry particularly. Pork is going to do even better, with the opportunities in Japan. And the Meat Export Federation, in large part due to the money from the cooperators and the MAP Program, is going to continue to hit very, very nice markets in Japan, Korea, and many other countries as well, as they do very, very well in those markets.

They really have done a wonderful job in meeting the food safety issues in Japan, and are very well positioned in promoting American meat as extremely safe, very high quality, with timely delivery, to the specifications the Japanese like to eat.

FOOD AID TO NORTH KOREA

Senator BUMPERS. Just two quick questions, Mr. Chairman.

Are you prepared, if the President gives the order, to—are we prepared to ship commodities to North Korea? Is that something that is on the front burner with you all?

Mr. SCHUMACHER. The Commerce Department has permitted an order, up to 500,000 tons, to Cargill, if they were to have a commercial sale. Yesterday we heard that there was a barter arrangement for American wheat to North Korea.

Senator BUMPERS. With Cargill?

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Mr. SCHUMACHER. With Cargill.

Senator BUMPERS. 500,000 tons?

Mr. SCHUMACHER. Well, 500,000 tons is the ceiling. We understand a modest amount was—

Senator BUMPERS. Up to 500. Well, I think the Commerce Department has only authorized up to 500,000, is that right?

Mr. SCHUMACHER. That is right.

RICE EXPORTS TO JAPAN

Senator BUMPERS. We shipped 125 million dollars' worth of rice to Japan last year. Do you know whether they consumed all of that or whether they used some of it to export to other countries?

Mr. SCHUMACHER. Under the sell/buy system, they did consume about 60 percent of that amount. The rest, we believe, went into their stocks. To our surprise, Senator, the Japanese have actually increased their production and particularly their stocks of rice.

I have been there a number of times on this issue, giving speeches and talking with them, on the need to get more of our rice going directly to their consumers. And we are debating and having discussions with them on the amount of the reexport, through food aid, that they would have from our rice. So it is a lively discussion, and we are fully engaged in it.

STATE MEDIATION PROGRAM

Senator BUMPERS. Who is the mediation expert for the Mediation Program, Mr. Smith?

Mr. SMITH. Well, the Farm Service Agency has the primary responsibility within our mission area, so I would like to ask Randy to respond.

Senator BUMPERS. Mr. Weber, that program was started in 1988, the Mediation Program, to mediate with farmers that were delinquent, and try to work out some kind of a payback. The IRS does this routinely. I thought it was a good program. We now have 22 States, including Arkansas, who have mediation grants. Let me ask you the question, How many dollars are involved, that are delinquent, that we are trying to mediate the collection of?

Mr. WEBER. We currently have \$2.3 billion delinquent under direct loans and approximately \$115 million delinquent under the Guaranteed Loan Program, but only a portion of these amounts have been mediated.

Senator BUMPERS. The Office of Inspector General has been critical of the program. That is what I am coming to. I personally think the concept is good and, so far as I know, the program has been working reasonably well. It has in my State, in any event.

Mr. WEBER. Yes; we very much support the program, and we believe it has been working well.

Senator BUMPERS. The average delinquent debt in my State, among those who are being mediated, is \$400,000. That is a pretty high average.

Mr. WEBER. Yes, it is.

Senator BUMPERS. If we get one-half of that, it is a good program. But, in any event, we have 22 States doing these mediation programs, trying to collect these delinquent bills. And my question is, What was the Office of the Inspector General's specific com-

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plaints about the way the program is working? Or maybe it was about the way the money was being spent.

Mr. WEBER. The concern that the inspector general has had with regard to mediation is not being able to access some of the records they feel they need in order to ensure that the money is being spent properly. We have been cooperating with the inspector general, and I believe the States have been cooperating to the extent possible under their respective privacy laws. There are some concerns with regard to some Northern States, and those are being worked through.

We are also in the process of changing our regulations to better define what mediation is and to clarify what requirements we intend the States to meet. We have reviewed the proposed changes with the inspector general, as well as the State mediation programs, and they generally feel that the new regulations will be acceptable. We are looking forward to putting those out very shortly, this year.

We are also requesting a doubling of the mediation funds, because we believe this is a very good program.

Senator BUMPERS. Did you give me a figure a moment ago when I asked you how much money is delinquent that we are trying to mediate?

Mr. WEBER. I gave you a total of how much is delinquent.

Senator BUMPERS. Is that \$3 billion?

Mr. WEBER. Yes; but I do not know how much of that is under mediation.

Senator BUMPERS. Well, \$258 million of that is in my State. That is rather shocking.

Mr. Chairman, I will not pursue this any further. Could I get a copy of the inspector general's report on that? Is that privileged in any way?

Mr. SMITH. I am not sure of the status of it, Senator, but we certainly will inquire when we get back to the Department and make it available if we can.

Senator BUMPERS. Thank you. Thank you, Mr. Chairman.

[CLERK'S NOTE.—The Office of Inspector General's Evaluation Report is not printed in the hearing record but is available for review in the subcommittee's files.]

Senator COCHRAN. Thank you, Senator.

Senator Kohl.

DAIRY OPTIONS PILOT PROPOSAL

Senator KOHL. Thank you, Mr. Chairman.

I have a question for Mr. Ackerman, another question for Mr. Schumacher, and a question for Mr. Smith.

Mr. Ackerman, when Secretary Glickman testified before this committee in February, we discussed what is being done to help dairy farmers better manage price risk, especially in light of the great volatility that we have seen in dairy prices over the last year. At that time, the Secretary indicated that he was reviewing a proposal for an options pilot program for dairy.

The 1996 farm bill authorized the Secretary to establish pilot programs to determine whether commodity options can help pro-

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ducers deal with fluctuating prices. And it seems to me that dairy farmers need it the most.

Now, why do I say it?

Well, the dairy price support program will be phased out by the end of 1999, No. 1. Dairy farmers are not covered by crop insurance, No. 2. And unlike most commodities, they get no transition payments. Dairy farmers have very few ways to manage risk. Really, they are on their own. And that is why I think an options pilot program should be a high priority for USDA as you seek to address the dairy price problems.

It is my understanding that the Coffee, Sugar, and Cocoa Exchange has submitted a dairy options pilot proposal. Mr. Ackerman, do you believe that this proposal has merit?

Mr. ACKERMAN. Yes, Senator; we are looking at that proposal. We view it as a very promising proposal for many of the reasons that you mention. It is very consistent with the approach we are taking with other crops, with other areas of agriculture, in developing a safety net, where farmers rely more on private market mechanisms rather than Government support programs.

Dairy, as you mention, is somewhat different in that it is not covered by crop insurance. The futures market mechanisms for dairy are relatively new. And dairy farmers do not have the background and experience in using these kinds of mechanisms for their price risk protection. A lot of work went into this proposal by the Coffee, Sugar, and Cocoa Exchange, with assistance from the dairy community. They reviewed the old options pilot program. They looked at a number of the problems that it had, and developed ways to overcome them in the new program.

So we view it as a very promising proposal.

Senator KOHL. Can you give me some indication that it is going to start some time in the very near future? Where is it in terms of your sense of priority, sense of urgency? How soon can we get this thing underway?

Mr. ACKERMAN. I cannot give you a timetable at this point. We are looking at it very actively. There are a number of issues involved with it. There are a number of questions about the structure of the program that we would like to pursue with the dairy community including the nature of the subsidies involved in it. There are ways we think it can be made more cost effective, so that farmers can participate in it, with less dependence on Government subsidy.

There is also a question of the funding source for it. The statute requires that the Secretary, to the maximum extent practicable, operate this program in a budget-neutral manner. We are examining what that means—how large of an obstacle that is and what potential budget sources would be available.

Senator KOHL. All right. Well, as I understand it, the program, in its present pilot form, is intended to cost perhaps \$10 million, which is a lot of money, but not a lot of money. And it could be modified somewhat if that becomes the big hangup. Also, moneys could be obtained from unexpended balances in other CCC programs. So, I guess what I am telling you is that I would like to hope that, beyond expressing your interest in the program, we in fact can get something off the ground. And I would like to have the

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opportunity to work with you to move that process, if you do not mind.

Mr. ACKERMAN. Senator, I appreciate it. And it is something that we are looking at very actively. As I say, the budget-neutrality question is one that we are examining, to see what is practicable and what is doable. Once we work through that issue, we would like to focus on this and see what we can do.

Senator KOHL. Thank you, Mr. Ackerman.

STATE TRADING ENTERPRISES

Mr. Schumacher, you and I have had several conversations about our mutual concerns with respect to state trading enterprises, such as the New Zealand Dairy Board and the Canadian Wheat Board, and the hindrances that they pose to United States exports. I believe that monopoly export boards such as these have an unfair trading advantage over countries such as ours, where the standard rules of competition apply. But this is not just an export issue. We are now seeing concerns raised on the import side also, where countries like China have monopoly import agencies.

I have appreciated the administration's support on this issue, and the strong statement made by Deputy Secretary Rominger at the WTO meeting in Singapore recently. Could you explain what the administration is doing currently with regard to cracking down on the activities of state trading enterprises? And could you tell us what, if anything, more the Congress can do to help on this matter?

Mr. SCHUMACHER. Thank you, and I appreciate that question.

Chris Goldthwait and I are working very hard on this, along with Ambassador Barshefsky and her team. In Singapore, we had very lengthy discussions—Deputy Secretary Rominger—on the issue of state trading, both the exporting and importing. Under the Singapore agreement, we are working very hard right now in Geneva and in the OECD. Chris has just returned, last week, from those two places, and he can outline where we are specifically on the 1997 preparation for the 1999 round.

We are taking it very seriously. It is also a very major part of our China WTO accession discussions between our STR and the Chinese officials, on the role of state trading. We have made a few breakthroughs, we believe, recently. We continue to make more as we go into that accession agreement.

Mr. GOLDTHWAIT. Senator Kohl, we are taking this step by step. We are seeking, first of all, transparency as to the operation of the state trading enterprises. By that, we mean we want information about their sales activity, about their pricing. We are in the process, in the working group on state trading enterprises, in Geneva, of developing a questionnaire that all countries will agree to answer with respect to both their importing and their exporting state trading enterprises.

We are making some progress, although, as of course you recognize, people like the New Zealanders, like the Canadians, are not wanting to be very forthcoming in the provision of information. And I think, based on the pressure we are applying in Geneva, the pressure we are applying in other negotiations that are ongoing on credit guarantees, in the OECD in Paris, and even the discussions

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that are ongoing in the Free Trade Area of the Americas initiative, I think we will get some degree of transparency.

If we, over the next year or two, can arrive at a better picture of what these entities are actually doing, what their trade-distorting behavior is, then we will be in a position to formulate the negotiating demands that we will place in the next multilateral trade round, which, for agriculture, is due to begin, as Mr. Schumacher said, in 1999.

So that is basically where we are. It is a front-burner issue.

Senator KOHL. Thank you.

Is there something more we can be doing up here on the Hill? Mr. SCHUMACHER. Why do not we discuss this with our STR people, and I could come back and talk to you on that?

Senator KOHL. All right.

Mr. SCHUMACHER. With someone from STR in the next week or so.

Senator KOHL. I would like that.

Mr. SCHUMACHER. We would enjoy that, too.

Senator KOHL. Thank you.

TIMING OF ADVANCE MARKET TRANSITION PAYMENTS

And, finally, Mr. Smith, in order to receive advance transition payments under the new farm bill, farmers are being required to have all of their lease arrangements finalized and disclosed to USDA by January 15 of each year. Now, in warmer climates, that might be a reasonable date. But in States like Wisconsin, final decisions about which fields a farmer is going to lease are not made until the early spring.

It seems to me that it makes more sense for farmers to be able to receive their advance payments whenever they meet the requirements, instead of having a strict deadline. It is my understanding that the administration may be sending a package of proposed farm bill technical corrections to Congress. Will you, Mr. Smith, be requesting a clarification in the farm bill language regarding that deadline of January 15?

Mr. SMITH. Senator, yes, we are. As you recall, in the farm bill, it specifically required that we make the AMTA payments on December 15 or January 15. And because of the difficulty the producers encounter in meeting that requirement, we are proposing legislation to give us more flexibility, so that we can accommodate the differences in farm planning across the country.

Senator KOHL. So there will be a clarification, then?

Mr. SMITH. Yes, sir.

Senator KOHL. Along the line of what I have suggested?

Mr. SMITH. Yes, sir; and I would like to ask Randy if he has any additional comments on how this could benefit the producers with regard to their leases.

Mr. WEBER. Certainly you raise a good question and a question that has been raised by many producers, because there are vast parts of the country in which leasing arrangements are not completed by January 15. And under current law, if the rental arrangement has not been made by January 15, then we cannot make an advance payment to a producer.

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The legislation that we are proposing would broaden the period of time in which producers could request advance payments—from November 1 through August 1. We think that would be broad enough to allow anyone to receive an advance payment and not have to wait until September 30 to receive the final AMTA payment.

Senator KOHL. Well, that is good. I do appreciate that very much. Thank you.

Thank you, Mr. Chairman.

Senator COCHRAN. Thank you, Senator.

CCC OUTLAY ESTIMATES

Mr. Secretary, on page 8 of your prepared statement, at the top of the page, it says the 1998 budget projects that CCC outlays for commodity programs will increase from about \$5 billion in 1997 to \$6.2 billion in 1998, and then decline again, to about \$4 billion by 2002. What are the reasons for these projected increases in CCC outlays from 1997 to 1998?

Mr. SMITH. Mr. Chairman, I would like to ask either Dennis Kaplan or Randy to respond to that. Some of the fluctuation is due to repayment of advance deficiency payments, which impacted the CCC outlays. But I am not sure whether that accounts for all of it.

Mr. WEBER. Mr. Chairman, we are estimating that the total CCC outlays in fiscal year 1998 will be \$9.9 billion, \$2 billion higher than fiscal year 1997. And that is principally because in fiscal year 1998 we will not receive repayments of advance deficiency payments, whereas in fiscal year 1997 we are receiving repayments of 1995-crop overpayments. CCC commodity assistance to producers, including loan programs, is expected to be about \$1.1 billion higher. And then, in each of the succeeding years, it is going down simply because the AMTA payments are declining in those years.

Senator COCHRAN. The what kind of payments?

Mr. WEBER. The AMTA payments.

Senator COCHRAN. What is that for?

Mr. WEBER. Agricultural Market Transition Act payments.

Senator COCHRAN. OK. These are the contracts that are entered into?

Mr. WEBER. Yes; these are the contracts that are entered into.

Senator COCHRAN. By the producers with the Government?

Mr. WEBER. Yes; those payments decline, from a fiscal year 1998 level of \$5.8 billion, down to just slightly over \$4 billion in 2002.

Senator COCHRAN. Are there assumptions made about the commodity prices and what effect that will have on CCC outlays? Or does that become irrelevant under this new program?

Mr. WEBER. Prices have much less effect under the 1996 act than they had under the previous farm bill, because then the payment rate was dependent upon whatever the market price was. Now, with the guaranteed payments, that is not a factor. It can still be a factor with regard to loan activity, however. Depending on where the market price is, we can have changes in loan activity.

As a matter of fact, this year, despite the higher market prices, we still have a fairly high volume of loans, especially in wheat and corn. They are running higher than they did last year.

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Senator COCHRAN. Is that a surprise, or was that expected?

Mr. WEBER. Somewhat of a surprise, but it is not unusual in a declining market. The loan program tends to provide producers with a fairly favorable interest rate, and they find that this gives them some interim financing and allows them to more readily market their grain.

Senator COCHRAN. We had always heard that our commodity programs—particularly the loan program—was a marketing tool. What, if anything, is going to be the practical consequence of the change that we have seen under the new farm program with respect to the marketability by producers of their commodities?

Mr. WEBER. Well, as you know, Mr. Chairman, the 1996 farm bill essentially freezes loan rates at the 1995 levels. In the case of rice, that is \$6.50 per hundredweight for the entire duration of the farm bill. Wheat is \$2.58. The only commodity for which there is some level of fluctuation is soybeans, and it has a very small range. The soybean loan rate for 1997 will be at its maximum of \$5.26 per bushel.

So, again, the loan rate in relation to the market prices will determine how much farmers use this program. But I tend to think, over the years, farmers do use it for interim financing. So even when prices are relatively high, we do have loan activity.

Mr. SMITH. Mr. Chairman, there is one observation I will make, as well, and that is with the price volatility that we are experiencing because of the flexibility in the planning by our producers domestically, and also because of the global demand for our agricultural commodities, our producers may experience more need to use the loan program as a tool, because they can see considerable price fluctuation between harvest time and the end of that loan period. And so, in order to take advantage of that fluctuation, you may find more producers parking their commodities temporarily in loans, at the low interest rate, to see what volatility will be introduced in the market in a given year.

LONG-RANGE EXPORT MARKET OUTLOOK

Senator COCHRAN. I know Mr. Schumacher talked about the record harvest in some of our competitor countries as having an impact on the level of our exports next year. What are the long-range expectations for export markets for American farmers?

Mr. SCHUMACHER. We have looked at the ERS baseline. And that shows that we are going to dip a little bit this year. But next year and the following years, it looks to be 5, 5.5 percent growth in our value-added; 4, 4.5 percent in our bulk. So it looks quite steady, Senator, through the next 6 to 8 years, to the year 2005.

Particularly, I think, noteworthy is that we are projecting, under our ERS baseline, to reach \$80 billion in exports by the year 2005, and that the trade surplus will in fact widen. Our export growth will move along about 5, 5.5 percent overall. Our import growth, though, will be 3, 3.5 percent. We are looking at a trade balance widening to \$34 to \$35 billion in exports over imports by the year 2005.

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TRADE BARRIERS TO U.S. EXPORTS

Senator COCHRAN. Does any of this take into account efforts that our Government is making to break down barriers to our entry into markets or expansion of markets? I notice, for example, this annual report the U.S. Trade Representative filed, and which was reported in the Washington Post on April 1, 1997, that talked about the fact that many markets around the world remain closed to U.S. exports and, to the extent our trade deficit is the result of these barriers, they must be reduced. That was a quote attributed to U.S. Trade Representative Charlene Barshefsky.

The article says:

In addition to 46 countries, the report of the most onerous trade barriers around the world also included four trading groups, including the 15-nation European Union. On the European Union, Barshefsky said she was, "particularly concerned by the EU's pervasive discrimination against U.S. agriculture exports—including rice, wheat, wheat flour, bananas, beef, dairy products, and certain fruit."

On China, Barshefsky said that United States companies and farmers still faced numerous barriers trying to get into that huge market.

Do these projections presume that we are going to continue to have these difficulties, or do they assume that we are going to break down these barriers? And, if so, how are we going to do it? And what, if anything, is the Department of Agriculture doing to help break down these barriers?

Mr. SCHUMACHER. Yes; we are, in fact, proposing some modest additional funding to continue to rigorously identify and then take action to break down these barriers. As you may be aware, we have quite a few problems right now with Europe. There is an EU veterinary team here trying to solve this difficult issue on our EU equivalency agreement. We are now at the WTO, awaiting an agreement, which we hope will be quite satisfactory to us, on discrimination against our beef going into Europe.

We are gradually resolving the rice issue on the tariff rate quota. And we hope to make progress within the next few weeks on the rice cumulative recovery system. But, again, it is very difficult, it is very time consuming, and it is slogging-type work that we are undertaking very aggressively with our friends in the Special Trade Representative's Office.

On China, as I mentioned earlier, we are in the midst of difficult negotiations on their WTO accession. So these barriers need to be further identified and action taken, especially on some of the smaller issues that do not appear all the time but that do have an impact. For example, we are working very closely in Mexico, of all things, with Christmas trees out of North Carolina and in the Northeast. A small issue, but an important issue for those growers in that area, as the TCK issue is in China to major wheatgrowers.

So we are aggressive. We are tightening up our work. We are re-allocating resources to deal with these market access barriers.

On the specific question, does the ERS baseline projection take into account all of these? I will have to come back to you in writing, and talk to our friends in the Economic Research Service to see how much of this they have captured, and what they have implied in their assumptions on market access barrier reduction over the next 8 years.

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[The information follows:]

The export growth projections in the ERS baseline are based on the current trading environment. They do not assume resolution of market barriers cited in the annual report of the U.S. Trade Representative, however, they do incorporate market access gained in the Uruguay Round and NAFTA agreements. Resolution of these numerous barriers would translate into greater global trade of agricultural products.

EFFECT OF POSSIBLE TRADE SANCTIONS ON CHINA

Senator COCHRAN. In the case of China, there appears to be a huge market there. And there is a lot of controversy about the extent to which we ought to be trading with China. Some think that because they have exported missile technology and have done other things that we disapprove of that we ought to impose further sanctions. What effect, if any, would be the imposition of economic or trade sanctions against China with respect to our agriculture exports? And how will that affect agriculture producers here in America?

Mr. SCHUMACHER. Two responses, Senator. One, I think people forget, or they may not be looking at the data, that China, in fact, is a net food exporter. They export 11 to 12 billion dollars' worth of food and import \$9 or \$10 billion. Their grain imports have fallen from 19 million tons to our forecast this year of around 7 million tons. They are a strong competitor of the United States with value-added in the Pacific rim, and recently have been exporting a modest amount of corn.

So our exports this year to China, excluding Hong Kong, are a little less than \$2 billion, projected, primarily in the soy complex and in poultry. And cotton is very, very important. Cotton, soybean oil, and poultry, and some beef parts as well.

Senator COCHRAN. So those are the commodities where we could see a dropoff in trade if sanctions were imposed; is that what you are saying?

Mr. SCHUMACHER. Those are the four major commodities that we are currently exporting to China.

Senator COCHRAN. Do you know what the dollar value is for any of those?

Mr. SCHUMACHER. Chicken is about \$550 million. Mostly the chicken feet, of all things. They eat a lot of chicken feet. Then the soy oil—I will have to get back to you precisely on that. Cotton—the other three I will get back to you on that, Senator.

[The information follows:]

Exports of U.S. soybeans, meal and oil to China totaled \$230 million in 1996, but could easily top \$1 billion this year. Last year cotton exports were \$800 million, and hides and skins were \$170 million. We also shipped \$200 million plus in fruits, vegetables, and tree nuts.

Senator COCHRAN. OK. The assumption, then, is that we are going to continue to work—and it would be good to know what the expectations are about the possibilities of success in breaking down these barriers and what that would mean in terms of increased exports. I think the reason it is important, from an Appropriations Committee point of view, is the impact that that might have on CCC outlays or the prices of commodities to producers.

The overall effect of increasing exports ought to be to increase the opportunity for profit in production agriculture, and less and

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less need for farm operating loans and maybe some of these other programs that we use to support production agriculture. In the risk management area, that can have an impact.

FURTHER CROP INSURANCE REFORM

Mr. Ackerman, let me ask you this. There have been suggestions that we expand the programs for risk management. As long as I have been in the Senate, we have always heard about the difficulties of the Crop Insurance Program, the unpredictability of disaster assistance when natural disasters occur, where there is clear evidence that crop insurance is not adequate to protect farmers against huge losses that are often sustained. What is the administration's view toward further reforms in this area?

We heard your comments earlier, but I continue to hear from other Senators who think that this is a major problem and that Congress and the administration need to get together and work out some new program for protecting against the harmful consequences of natural disasters for production agriculture.

Mr. ACKERMAN. Senator, I appreciate the question.

Crop insurance has changed fundamentally in the last 3 years. We have gone from a program that covered about 30 percent of covered crops to one that covers almost 80 percent. We have gone from a program that was based on average yields to one that is based on individual yields. We now have a program that, up until the early nineties, was a perpetual money loser as far as underwriting fundamentals were concerned to a program that now has an actuarial loss ratio the past 3 years within our target.

We also have a program that has expanded into new crops, into new pilot areas, and into new concepts like revenue insurance and the program that Senator Kohl was mentioning earlier, the options pilot program. So, I think, when you look at crop insurance today, it is really a very different program, a very different organization than what existed 3 or 4 years ago. The changes of the last few years, I think at this point, are just starting to kick in.

FAS MARKET BARRIER INITIATIVE

Senator COCHRAN. In connection with the question I was asking about barriers to trade, I notice there is a request in the budget for an increase of \$500,000 for a market barrier identification initiative. Why is this needed, if we have the USTR filing this annual report that I just cited and which we have available to us? Why do we have a proposal for a Department of Agriculture initiative identifying market barriers as well?

Mr. SCHUMACHER. The Special Trade Representative's Office is identifying quite a few of the general barriers, as I mentioned earlier. There are a lot of specific barriers that affect a number of areas in commodities in this country. I mentioned the issue of Christmas trees, which is not a huge export, but a very important one for North Carolina, Pennsylvania, and New York.

We not only want to identify these specific barriers, we also want to start taking identifiable actions to address these barriers in detail through our trade policy work as we begin to formulate our programs at the WTO. We would like to get a lot of these resolved prior to getting into negotiations at the WTO. Those that we cannot

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resolve, we are going to take them up as we move toward the 1999 rounds.

CHANGES IN THE COOPERATOR PROGRAM

Senator COCHRAN. I notice there are some changes in the Cooperator Program. You are suggesting an increase in the contribution from the private companies or groups who participate in that program. What is the practical consequence of that? Are they going to quit participating or are they going to come up with the extra money? What is your expectation on that?

Mr. SCHUMACHER. Well, Mr. Chairman, we are working quite closely with the cooperators, as the intent of Congress and the report language last year was to make it a bit more competitive. And we are looking at competitive criteria, which we are keen to discuss with your staff—the criteria would have a number of aspects to it, one, on contributions and, two, on measuring performance on exports.

And I think that very few cooperators would have problems with this. In our discussions—we have had three meetings with them. It is basically adjusting the Cooperator Program to broadly similar competitive criteria that we have with the Market Access Program, as we made reforms in that program as well, putting them on a competitive basis.

Senator COCHRAN. Well, our committee report, or at least the statement of managers accompanying the conference report for this fiscal year suggested that the Department develop procedures and criteria for a competitive bidding process for awarding these funds. Has anything been done in response to that suggestion?

Mr. SCHUMACHER. We are right in the midst of our discussions with our staff. And we want to also consult with both Houses of Congress before we implement agreements with the cooperators and put this into practice. We have work to do yet, sir, on introducing the competitor measures, and we do not want to do that before we have adequate consultation with the cooperators and with both Houses of Congress.

PUBLIC LAW 480 RESCISSION

Senator COCHRAN. There is a proposed rescission before the committee to remove \$50 million in funding for the Public Law 480 title I program—that we rescind \$3.5 million of ocean freight differential funds and \$46.5 million in subsidy budget authority in the Direct Credit Program. What is the reason for the rescission request?

Mr. SCHUMACHER. I would like Mr. Goldthwait, with your permission, to answer that question, sir.

Mr. GOLDTHWAIT. Senator, this is one of those cases where we have had to make some very, very difficult decisions about conflicting budget demands and tradeoffs. The reason for the rescission that we have proposed is because of additional funding needs with respect to domestic feeding programs that are managed elsewhere in the Department.

Senator COCHRAN. Is that the WIC Program particularly?

Mr. GOLDTHWAIT. Yes, indeed.

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Senator COCHRAN. Let me ask you this. The domestic feeding programs that are funded in this budget, including the Food Stamp Program, seem to continue to grow in spite of reduced rates of unemployment, in spite of economic conditions that would indicate greater job opportunities, better access to health care, a lot of changes in our society that seem to make access to a higher standard of living within reach of more and more Americans. But yet the cost of these subsidy programs seem to continue to go up.

I know that is not within the jurisdiction of this committee, but it seems to me that we ought to be doing the kind of job that manages those programs so they do reach those who need them. We have seen a lot of reforms made and a lot of changes made in the legislation. But now the administration is coming in with assumptions that will expand those programs even further in this budget year and requesting this rescission of funds for the Public Law 480 title I program.

The budget indicates that commodity shipments would be reduced by approximately 200,000 metric tons as a result of this proposed rescission. But it also indicates that allocations of title I commodity assistance that have already been announced would not be affected by the rescission, because the reduction in program funding will be taken from a reserve of unallocated funds and from unobligated funds carried over from 1996.

What is the total of unallocated funds and unobligated funds carried over from 1996?

Mr. GOLDTHWAIT. The \$50 million rescission breaks down roughly 50–50 between the current fiscal year reserve and the carryover. The carryover is actually \$22 or \$23 million, and the unallocated reserve is about \$26 or \$27 million. So it is very close to a 50–50 split there.

As you may know, our programming practice at the beginning of each fiscal year is to allocate the majority of the Public Law 480 title I funds, but to maintain a small reserve for needs that cannot be foreseen at the very beginning of the fiscal year, but which develop in the course of the fiscal year. And, in effect, the proposed rescission draws on those funds, plus this small carryover.

PUBLIC LAW 480 TITLE I CARRYOVER BALANCES

Senator COCHRAN. Why were Public Law 480 title I funds carried over from 1996? And since they were, why were they not included in the initial funding allocation for fiscal year 1997?

Mr. GOLDTHWAIT. In many years there is a small funding carryover. This arises for a couple of reasons. It arises when we have a planned program that falls through very late in the fiscal year, when, for one reason or another, a foreign country cannot complete the negotiations with us and actually sign its program in time to ship the commodity in a timely basis.

It also occurs because of shifts in commodity prices and because of shifts in freight costs—the estimated value or the estimated cost associated with a particular country program is in fact different from the actual cost. And, indeed, the carryover was a little larger this year than usual. We did see a situation where, at the end of the fiscal year, we were beginning to see a reduction in commodity

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prices for some of the commodities that were heavily programmed—wheat, for example.

So that is the origin of the carryover. And it was in fact a little larger going into fiscal year 1997 than we would have expected under normal circumstances.

Senator COCHRAN. But it is just confusing to me that we can see a rescission being requested, and then the budget documents explain that this really does not matter. We have got carryover funds, and we have got unobligated funds. Why does it matter? Why do we just not appropriate what you are asking for next year?

Mr. GOLDTHWAIT. It is not a case of not mattering. I think the point we were trying to get across in the budgetary description was that we will not find it necessary to, if you will, renege on any existing fiscal year 1997 commitments to countries that we have already made. In other words, there is just enough unobligated funding that is available to cover this rescission without having to go to any country to whom we have already offered a fiscal year 1997 program and saying to that country we are not going to be able to follow through with that commitment.

Senator COCHRAN. But if there are any additional requests made, they cannot be met?

Mr. GOLDTHWAIT. That is correct, unless some other existing fiscal year 1997 program fails to materialize.

Senator COCHRAN. You do have the authority within the Public Law 480 program though to transfer funds within and between titles, do you not?

Mr. GOLDTHWAIT. That is correct, within limits.

Senator COCHRAN. Well, has the administration concluded that if unobligated and carryover funds are not required for title I, they also will not be required to supplement funding for titles II or III of the program this year?

Mr. GOLDTHWAIT. That is our best estimate as of the current time.

Senator COCHRAN. That is enough to give you a headache, is it not, trying to figure that out?

COCHRAN FELLOWSHIP PROGRAM

I was glad to hear that you have requested \$2.4 million for the fellowship program, which the Department, several years ago, described as the Cochran Fellowship Program. I just came back, incidentally, from a trip with Senator Stevens, chairman of our full Committee on Appropriations, to the Russian far east and to South and North Korea. I had an opportunity to meet with some participants in this program on that trip.

And from what I hear from those who work in the consulates and the embassies around the world where there are eligible countries, it seems that this is a program that provides a unique opportunity for participants to learn more about our free market and economic systems. Through this program, developing countries and emerging democracies can learn from us and develop closer ties that result in better trade opportunities for U.S. exporters and economic development opportunities for the participating countries.

I wonder the extent to which we are able to get the appropriated funds for this program supplemented by the Emerging Markets

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Program and by AID programs. I know that we have had moneys allocated from these other programs. Do we expect to have any money allocated in the next budget year to supplement these funds?

Mr. SCHUMACHER. Yes; because the program has been, as you mentioned, very successful. We are looking at \$1.8 million, maybe \$2 million, from USAID and from the Emerging Markets Program about \$1 million. So with the \$2.4 million of appropriated funding, we are looking at nearly \$5.5 million, to sustain this very successful, innovative program.

Senator COCHRAN. That is good to hear. One person I met, had come back from California to Vladivostok—that is an open city now, for the first time in many, many years, as everyone knows—where they are beginning to develop an indigenous agriculture productivity and food marketing capability. And there is a lot of excitement about the close relationship that exists between our west coast and the Russian east coast.

The State of Washington, for example, is having great success in marketing apples in that part of the world now. We also are seeing other new relationships developing. Even on the Island of Sakhalin, I ran into an Embassy person who was very excited about the fact that she had been involved in recruiting participants for the Cochran Fellowship Program. She told me what a success that had been. So I am very pleased to have your report.

I am submitting for the record some questions for further information about participant levels and examples of what the program has actually accomplished to date. We are hopeful we can get the committee to continue to support it.

Mr. SMITH. Senator.

Senator COCHRAN. Yes.

COCHRAN FELLOWS FROM SOUTH AFRICA

Mr. SMITH. I had the pleasure of working with the program, primarily with the Gore and Baake binational with South Africa. And my experience with the Cochran fellows that have come to the United States from South Africa has been very rewarding.

For example, one young man who operated a small dairy in South Africa came to the United States on a Cochran fellowship to learn how to expand his production through improving the feeding of his dairy herd. But on the way back, he told me he learned something else, and that was to focus on developing co-ops in his community. So he came for personal reasons and he left with a perspective on how to help his entire community. And he went back with the intent of developing a marketing co-op to help market not only his milk from his dairy herd, but his neighbors' as well.

Senator COCHRAN. That is very interesting. I have had some other experiences in the former Eastern bloc countries, such as Poland, where they now have an alumni group which meets every month. They get together and talk about their experiences in the United States and what they learned. They stay together. It tends to generate a lot of camaraderie. But the benefits are that they have learned new strategies for themselves. They have developed a new sense of confidence in being able to succeed in a free market economy. It was quite something to see—the level of excitement

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and optimism that was generated by these participants. It seems contagious and that was very gratifying.

FISCAL YEAR 1998 EXPORT ENHANCEMENT PROGRAM BUDGET REQUEST

There are a number of other questions on various subjects that I have here that I am going to submit for the record. I do want to ask about the Export Enhancement Program though. The budget proposes \$500 million, which is the maximum authorized level of funding, as you point out. This year we have a \$100 million limitation on the program that was included in the appropriations act. The reason for that was that our discussions with those who were interested in the program indicated that they did not think that there would be a demand for any more than \$100 million this year.

Why do you believe that there will be a demand for more than \$100 million in fiscal year 1998?

Mr. GOLDTHWAIT. Senator, we believe very strongly that we need the Export Enhancement Program, as Secretary Glickman has said, as a potential tool, in the event that we face aggressive subsidization by our competitors, particularly the European Union, although we could also face price discounting by some of the state trading enterprises that Senator Kohl alluded to earlier.

The fact of the matter is that under their GATT allowance, the European Union will have, in terms of subsidy authorization, close to or perhaps even a little more than \$10 billion to promote their commodities through price discounting. We believe that we very much need to have the \$500 million allocation to fall back on in the event that we face competitive conditions that are considerably more difficult than what we have been fortunate to face in the current year.

As Mr. Schumacher noted earlier, this year we had somewhat smaller availabilities for export of wheat and some of the other commodities for which we traditionally use the Export Enhancement Program. We simply do not know, until we have a better idea of what Northern Hemisphere harvests are going to be, what we might be called upon to do in the new marketing year and the new fiscal year.

EU TRADE-DISTORTING SUBSIDIES

Senator COCHRAN. It seems that we entered the Uruguay Round hoping to be able to negotiate an end to trade-distorting subsidies. Now we hear more about what the Europeans are doing to increase their allocation of funding to enhance their commodities in overseas marketplaces which is to our disadvantage. If this is not a trade-distorting subsidy by the EU, what is it?

Mr. GOLDTHWAIT. It certainly is a trade-distorting subsidy. And in fact, in the Uruguay Round we did achieve limits on that. And over the life of the phase-in period, the EU will be required to reduce their expenditures on export subsidies by a total of 36 percent. The fact that here, midway through the process, they still have the ability, if you will, to use up to \$10 billion simply says a lot about their starting point.

Senator COCHRAN. Well, it seems that we have got our work cut out for us to protect our interests in this global market. And I am in favor of a robust and aggressive marketing program, where our

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Government works in a cooperative way with our private sector to ensure that we do not get mistreated by trade barriers being erected or unfair practices of any kind.

So I do not know what the wishes of our committee will be with this particular request, but I am inclined to support what you are asking. I hope that we have the funds allocated to our committee that will permit us to make this available if needed.

IMPORTANCE OF MARKET ACCESS PROGRAM

The Market Access Program has already been discussed and mentioned. I am hopeful that we can continue the current level for that, the fully authorized permanent funding level of \$90 million which is included in the budget. Does this program continue to be important for us in order to promote and expand agricultural exports from the United States?

Mr. SCHUMACHER. Senator, this program is vital. As mentioned earlier, our value-added programs are moving forward. Our cooperators are being much more innovative in the wheat area and in corn and in soybeans. Soybeans have been terrific in using this money to get access in new markets like China for soybean oil. I mentioned earlier the Meat Export Federation did a marvelous job as did the cotton folks in South America on value-added cotton. I could go on for much more time than I think is appropriate here.

I have been at this now nearly 3 years, and I am just excited about what is going on among our exporters, the cooperators, and participants in the Market Access Program. I can assure you the Europeans, the Chileans, the Argentineans, and even the Uruguayans, who were in yesterday, are very admiring of this program. The Minister of Agriculture specifically mentioned the extraordinary performance of the Meat Export Federation, and how they would love to duplicate that.

We have market penetration because of the cumulative success of this program. I am going to work very, very hard to make that a continuing success, with our private sector.

Senator COCHRAN. I appreciate hearing that good report. It would be helpful if we could have for the record a description of the program requirements for participants now. We know there have been legislative changes made. Senator Bumpers referred to them. We are familiar with them. We argued on the floor of the Senate, in debate, over amendments that were proposed, maintaining that this program could be improved. It would be good to have a summary of the changes that have been made and how they are working, so we will become better able to argue against any amendments that might be designed to delete the funds provided for this program when we get to the floor.

I assume that Senator Bumpers is not going to give up. Maybe the program has not been improved enough. But whatever the facts are, we need to know them so we can describe what is going on with this program to the Senate when the bill gets to the floor. That would be very helpful to us.

Mr. SCHUMACHER. We will do that, sir.

[The information follows:]

Consistent with the Administration's commitment to streamline government programs, new MAP regulations were published on February 1, 1995, that increased

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flexibility and simplified program requirements for the participants. The MAP regulations reflect public comments and changes made by the Omnibus Budget Reconciliation Act of 1993 and most recently, the Federal Agriculture Improvement and Reform Act of 1996. Specific changes in the MAP include:

- eliminated the requirement for an applicant to show that the represented U.S. agricultural commodity faces an unfair trade practice in an overseas market;
- give priority assistance in the allocation of brand promotion funding to small businesses and cooperatives;
- established procedures for appealing compliance findings;
- simplified contracting standards and procedures;
- extended the time period during which expense claims may be submitted for reimbursement; and
- liberalized U.S. origin identification requirements to permit the use of generally recognized states or regions within the U.S.

In addition, the Department has administratively implemented the following improvements to streamline and expedite program management:

- simplified reporting requirements for end-of-year contributions;
- delegated to FAS Commodity Division Directors the authority to approve routine administrative issues;
- eliminated the requirement for formal amendments to effect changes in approved activity plans other than those that are deemed “significant”;
- delegated authority to the State Regional Trade Groups to approve brand company plans valued at no more than \$50,000, thus expediting the approvals for primarily small companies participating in the MAP;
- eliminated the need for all brand companies, 80 percent of which are classified as “small,” to track and report expenditures by multiple cost categories for brand activities.

The Department also undertook an extensive analysis of the methodology and criteria used to evaluate MAP applications and allocate funding among participants. Based on public comments received in response to a Federal Register notice on proposed changes and the results of the analysis, the Department adopted and published revised evaluation criteria that included:

- export performance criteria that is now based on three years of historic export data, rather than one year;
- industry contribution levels that now include actual past contributions for prior year participants, not only the level projected for the coming year; and
- the competitive review process was modified to compare the relative performance of each applicant based on four weighted criteria: contributions (40 percent), export performance (30 percent), export goals (15 percent), and accuracy of past projected export goals (15 percent).

Background: In response to GAO and OMB, the regulations have also been tightened with regard to funding additionality and evaluation. Participants must certify and demonstrate that any funds received will supplement, but not supplant, any private party contributions to the program. For evaluation, we added reference to the Government Performance and Results Act (GPRA) in the activity plan and evaluation sections. The critical point is that language now appears in the rule which states that “a participant that can demonstrate additional sales compared to a representative base period, * * * will have met the overall objective of the GPRA and the need for evaluation.”

The streamlining of the MAP has been well received, and the Department continues to make program modifications to further streamline operations and ease administrative requirements for program applicants and participants.

CREDIT RULES FOR BRAZILIAN IMPORTERS

Senator COCHRAN. You mentioned South America. I notice that there are some concerns about the Brazilian Government's recent decision to establish some different credit rules for companies importing agricultural commodities, compared to those who are purchasing commodities from domestic sources. I understand that exports of U.S. cotton and wheat could be particularly disadvantaged.

Are you aware of this new development? Can you tell us about it and what we may be doing to persuade the Brazilian Government to treat exports in a fair way?

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Mr. GOLDTHWAIT. The Brazilians basically are setting some rules for the import of agricultural products that benefit from credit arrangements. In effect, what they are doing is applying limitations on the use of short-term credit, up to 1 year. In effect, we have been very successfully using our Credit Guarantee Program, the GSM-102 program, in Brazil. You have mentioned its success in supplying cotton. We have sold about 12 million dollars' worth of cotton so far this fiscal year under the program. We have sold a total of about 20 million dollars' worth of agricultural commodities to Brazil under the program so far this fiscal year.

We are in the process of adjusting the credit term that we use for our program to Brazil so that it will be a little longer and it will conform to the requirements of the Brazilian arrangements. And we believe that the credit program will continue to be a useful tool, with this small adjustment. And we intend to put out a press release that makes that adjustment formal within the next 2 or 3 days.

BOLL WEEVIL ERADICATION LOANS

Senator COCHRAN. Speaking of cotton, we have the boll weevil eradication loans that were funded in the fiscal year 1997 appropriations act. We understand that FSA has not yet released the money because the regulations have not been promulgated. It is necessary that these funds be made available by May 15, so that the planned programs can be continued and the program expansion that was contemplated can be initiated.

APHIS tells us that they have supplied the Farm Service Agency with all the information the agency has requested. What is the problem here about getting these funds out? Does anybody know the answer to that?

Mr. WEBER. Mr. Chairman, we are about ready to go forward with publishing the rules. We are hopeful that they will be out in May and that we can start the program in May and have all of the funds obligated by the end of the fiscal year.

Senator COCHRAN. Is there any timetable for making the loan program available to qualified users?

Mr. WEBER. We are hopeful that we can start making those loans available sometime in May.

Senator COCHRAN. Today?

Mr. WEBER. No; sometime in May.

Senator COCHRAN. Oh. [Laughter.]

Mr. WEBER. Sorry. I would like to have made it today.

Senator COCHRAN. Well, I had heard that there was possibly a meeting today with the Secretary on this subject, or some subject relating to the cotton industry and the boll weevil program.

Mr. SMITH. Senator, I have a meeting scheduled this afternoon with the National Cotton Council to bring them up to speed as to where we are in that process of clearing the regulations. There are a couple of concerns that, even after we get our regulations out, may affect our implementing the program. I understand that we have a lawsuit in Texas that may encumber us in our ability to make a loan to that association until that lawsuit is settled.

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But we hope to be able to discuss those things with the participants. They should not hold up our regulations; they may just impact our ability to implement the regulations for those associations.

Senator COCHRAN. Well, we appreciate your working with the industry to deal with this problem. It seems that we have a program now that is moving along. And if we keep it moving and keep the Federal agencies that have a role in it on target with the contributions that are being made by individual producers, in a concerted effort, we may be able to eradicate the boll weevil and increase the proficiency and productivity of our cotton farms across the country. That will mean a lot to our economy, particularly in the cotton-producing regions.

So we appreciate your assistance and your understanding of the importance of these issues, and the promulgation of the regulations and the making available of the \$34 million in loan authority that we have authorized for this program.

SUBMITTED QUESTIONS

Well, you all have been very patient with the questions of the members of our committee and with me this morning. We appreciate your cooperation. I have a number of questions on these and other subjects to submit so we can have a complete record that will help us explain and answer questions that we might have to answer when this bill comes before our committee and then is on the floor of the Senate for consideration.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

FARM SERVICE AGENCY

QUESTIONS SUBMITTED BY SENATOR COCHRAN

FARM OWNERSHIP LOANS

Question. How has the Farm Service Agency tried to increase participation in the guaranteed loan area?

Answer. FSA has tried to increase participation by making the guaranteed loan program more accessible and easier to understand for both lenders and loan applicants. Many improvements have been made over the past several years. For example, we implemented a Certified Lender Program to provide our most experienced lenders with a streamlined application and quicker turnaround on guarantee requests. Also, we consolidated over 14 separate forms and certifications into a new application. In addition, we have recently issued a new Lender Manual to assist lenders in making and servicing guaranteed loans. This summer we will continue to gather suggestions for improvements and implement program enhancements by meeting with lenders and other parties interested in our program. We intend to address concerns over application processing time, consistency between Agency field offices, and application requirements for small loans. These suggestions will be considered as the Agency modifies its Guaranteed Program regulations.

Question. The fiscal year 1998 budget request proposes a \$4 million increase for emergency loans. Farmers use these low-interest loans to help recover from natural disasters. How did the Agency derive this program level for fiscal year 1998?

Answer. The fiscal year 1998 program level was basically derived as an extension of the loan level amount originally requested, and subsequently appropriated, for the fiscal year 1997 Budget. When the 1998 Budget was being formulated in the summer of 1996, the Department approved an extension for 1998 of the then-pending 1997 Budget request of \$25 million. However, after enactment of the 1997 USDA Appropriations Act, the appropriated subsidy of \$6,365,000 resulted in a supportable program level of only \$20,931,000.

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Under credit reform procedures, more recent data on interest rates can affect actual funding levels that are available on October 1. Because the supportable level decreased for 1997, the 1998 Budget appears to be an increase of \$4 million, but the original intent was to have \$25 million available in each year.

Question. The President's budget requests funds to support an increase of \$766,000 in Indian tribe land acquisition loans. The explanatory notes show the level requested will provide 2 direct loans in fiscal year 1998. Who has applied for these loans?

Answer. With the availability of funds in fiscal year 1998 for this program, field staffs will be able to promote and receive applications from Indian tribes interested in purchasing land for use by its members. Based upon historical interest in this program, FSA anticipates receiving, at a minimum, two applications for assistance.

Question. The fiscal year 1998 budget requests an increase of \$11 million for credit sales of acquired property. The budget indicates that this program will be targeted to new and beginning farmers. How will new and beginning farmers be targeted for assistance by this program?

Answer. The 1996 Farm Bill requires FSA inventory farms to be advertised for sale to a beginning farmer or rancher no later than 15 days after acquisition. If no acceptable offer is received from a qualified beginning farmer or rancher within 75 days of acquisition, the property will be offered at a public sale to the highest bidder. FSA offers financing through the credit sales program to beginning farmers to purchase these properties during the 75 days in which the properties are advertised for sale only to beginning farmers.

STATE MEDIATION GRANTS

Question. The President's fiscal year 1998 budget request is \$4 million for State Mediation Grants, an increase of \$2 million from fiscal year 1997. The budget indicates that this request reflects the anticipated level of grants needed for 25 States. Currently, 22 certified States are participating in the program. Have more than three States applied to participate in the program? If so, which States? And which 3 are proposed to receive assistance in fiscal year 1998?

Answer. There has been considerable interest by States in participating in USDA's mediation program. In fact, the fiscal year 1997 funding level of \$2 million was insufficient to fund all requests by the 24 participating States. Florida and Missouri received certification of their programs in fiscal year 1997, but lack of Federal funding has forced these States to fund the programs themselves, limiting their scope. Several States have scaled back their programs or delayed planned expansions as a result of limited Federal funding. USDA anticipates that Idaho and Pennsylvania will submit certification applications soon, raising the total number of participating States to 26.

Question. The USDA Inspector General released a report on the agricultural mediation program administered by the FSA. The Inspector General (IG) identified about "\$2.1 million in excessive or questionable reimbursements of operating costs for activities that did not involve mediation." The IG recommended that monitoring was needed in order to disburse the appropriations properly. How has FSA strengthened its monitoring efforts and addressed the need to institute cost requirements?

Answer. FSA has reviewed the IG findings and accepts its recommendations on providing closer scrutiny of State programs' grant applications and has implemented many of these recommendations for fiscal year 1997 grants. FSA and State mediation officials are interested in jointly developing a common reporting format and uniform performance indicators and measures to assist in evaluating State programs' effectiveness. The Agency expects to publish revised mediation regulations this year to provide uniformity to the grant application and evaluation process.

The Agency believes IG relied on the Federal administrative dispute resolution statute for a definition of mediation during its evaluation of the State mediation programs. Because this definition of mediation excludes various financial analysis, credit counseling, and other services, the IG findings pertaining to the relative costs of mediation by the State-certified programs overstate the questioned and unsupported costs cited in the report. We believe State programs should not be penalized over a definition of mediation that does not reflect the flexibility designed to meet individual State needs. It is this flexibility that makes the State mediation programs so successful.

Agency and State mediation officials are working on identifying the information necessary to track cases for audit purposes, while at the same time maintaining confidentiality, a cornerstone of successful mediation. Certain data that is measurable and common to all State programs will be gathered and reported to USDA to enable better tracking of overall program effectiveness, efficiency, and accountability. We

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believe this can be implemented to satisfy IG audit needs, yet protect the integrity of mediation confidentiality.

DAIRY INDEMNITY PROGRAM

Question. The budget requests \$100,000 for the Dairy Indemnity Program for fiscal year 1998. How much of the fiscal year 1997 appropriation has been obligated to date?

Answer. Carryover fund balances of \$157,305 from fiscal year 1996, as well as the 1997 appropriation of \$100,000, are available for obligation needs of the program. As of April 8, the entire amount of \$257,305 has been obligated for this program, and subsequent claims remains unfunded.

Question. What is the current balance in this account?

Answer. As of April 8, the unobligated balance is \$0.

SALARIES AND EXPENSES

Question. The fiscal year 1998 request proposes a decrease of \$64 million for FSA salaries and expenses reflecting a reduction of 1,784 direct county office staff years. USDA Secretary Glickman has announced a moratorium on office closings through the end of the year. Approximately how many county offices would be closed at the fiscal year 1998 budget request level?

Answer. The 1998 Budget Appendix made mention of a reduction of about 500 service centers, to 2,000, by the end of 1999. There was some internal FSA contingency planning associated with the proposed county staff year reduction because reductions of that magnitude imply some office closings. However, no specific number of office closings were built into the 1998 Budget, and no closures will occur without full consultation with the Congress and approval by the Secretary.

Question. Are the proposed 1,784 direct county office staff year reductions a part of the Administration's plan to reduce county office staffing to 2,000 by the year 2000?

Answer. The proposed 1,784 direct non-Federal county office staff-year reductions in the fiscal year 1998 budget estimate are a part of the Administration's proposal to reduce non-Federal county office staffing to a total of 4,879 by the end of fiscal year 2002. There are no plans to reduce staffing below the 4,879 FTE level.

Question. What process will USDA use to reduce the number of county offices in the States?

Answer. The total number of FSA offices within the USDA service centers has not yet been determined. To assure that USDA provides the best service possible to our customers, any decisions to close USDA field offices or reduce an agency presence in a USDA service center must be done in coordination with other agencies located at the site, including Rural Development and Natural Resources Conservation Service. The original office closing plan that was developed under Secretary Espy focused on six basic criteria to allocate the office reductions: program delivery cost, service group and customer base, complexity, geographic service area, collocation status, and workload intensity and productivity of the office. We would strongly consider the use of these or similar criteria in any additional office closing effort.

Question. The Secretary announced that no county offices would be closed this year. How much savings did you anticipate as a result of county office closings in fiscal year 1997? Will you still achieve this savings?

Answer. The fiscal year 1998 President's Budget did not assume any county office closures or associated savings in 1997 beyond those already approved under the Department's adjusted 1994 plan.

Question. As a result of the 1996 FAIR Act have farm program changes decreased or increased the workload of the Farm Service Agency and its staffing needs?

Answer. Generally speaking, the 1996 FAIR Act has reduced FSA workload. For example, the pre-Farm Bill fiscal year 1997 President's Budget Estimates prepared in January 1996 included county workload staffing needs of 13,224 FTE's for fiscal year 1996. Following passage of the 1996 Act in April 1996, FSA performed an internal workload analysis that showed lower staffing needs for 1996, down to an estimated 12,835 county office FTE's. The actual FTE's worked for 1996 were 12,738. FSA's analysis also showed declining workload for fiscal year 1997, to 11,946 FTE's. Actual use of FTE's in 1997 will be somewhat less than that. For fiscal year 1998, additional workload decreases were projected in FSA's analysis, with workload stabilizing thereafter. However, an independent study will be performed that will seek to identify other operating efficiencies in order to achieve further FTE reductions.

Question. How many RIF's and buyouts will occur in fiscal year 1997?

Answer. The most current data, as of April 7, 1997, shows a total of 1,241 separations in Federal and county offices.

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Question. What is the cost of the RIF's? What is the cost of buyouts?

Answer. The total cost of the fiscal year 1997 separations is \$42 million; buyout costs were \$34.7 million and RIF costs were \$7.3 million.

Question. What additional RIF's or buyouts are assumed for fiscal year 1998? How will these be funded?

Answer. The fiscal year 1998 President's Budget proposal for the FSA Salaries and Expenses account includes proposed funding of \$56.2 million for separation costs in order to achieve staffing reductions of 2,119 staff years. This amount includes \$6.7 million to separate 269 Federal office employees and \$49.5 million to separate 1,850 non-Federal county office employees. Because these separations are planned for approximately October 1, 1997, salary and benefit savings of the separated employees of about \$64 million more than offset the separation costs.

Question. What impacts will the proposed reductions in FSA personnel have on FSA's ability to serve the crop insurance needs of producers adequately and efficiently where the agency has maintained FSA delivery?

Answer. The reductions in FSA personnel will require FSA to prioritize workload in order to service the needs of all producers, including crop insurance needs.

BOLL WEEVIL ERADICATION PROGRAM

Question. Boll Weevil Eradication loans were funded in the fiscal year 1997 Appropriations Act. The FSA has not yet released this money because the regulations have not been promulgated. I understand that the requirements for the environmental impact evaluation have been met, and that APHIS has supplied FSA with all information the agency requested. However, the regulations have not been published for comment. It is necessary that these funds be available by May 15 so that current planned programs can be continued and program expansion can be initiated. Please provide an estimate of the amount of the loan authority, which is approximately \$35 million, that you expect to utilize if the loan program is available.

Answer. All environmental requirements have been met and provided there are no serious challenges to the environmental assessment, it is anticipated that FSA will begin making Boll Weevil Eradication loans within the next 45 days. At this time, we do not know how much of the available loan authority will be utilized this fiscal year. A recent recalculation of the program's subsidy rate has increased the loan authority from approximately \$35 million to \$40 million.

Question. If this loan program is not established in fiscal year 1997, the money will not be available for the next fiscal year. Has the USDA considered proposing that this funding be made available until expended?

Answer. We have not asked for the funds to be made available until expended. However, the Department would not object to having the funds made no year funds to allow for unforeseen circumstances which could impede utilization of the money this fiscal year.

Question. The Committee Report accompanying the fiscal year 1997 appropriations bill explicitly directs "FSA local offices to require cotton producers to report acreage planted in cotton in post-eradication zones, active eradication zones, and any area in which a referendum is scheduled to be conducted in the next 3 years." Please provide an explanation of the status of this directive and the schedule for action.

Answer. A Decision Memorandum for the Secretary on accepting acreage reports for the Boll Weevil Eradication Program has been drafted jointly by FSA and APHIS and is currently in clearance.

Question. What is FSA's position on collecting data for this program?

Answer. The FSA position is included in the Decision Memorandum, but we do not wish to preempt the Secretary's prerogative regarding compliance with the congressional directive.

Question. Is FSA eliminating the commodity analysts subdivision under the guise of reorganization or is FSA consolidating this subdivision?

Answer. FSA has no intent of disbanding the Economic Policy and Analysis Staff or any of its subgroups. Retention of a core group of commodity and natural resource analysts working together recognizes the synergy that exists between these analysts, which is necessary for accurate and timely response to Administration, congressional, and private sector concerns. Although this Staff has downsized significantly, from 53 slots in January 1993 to 32 slots currently, this downsizing reflects adjustments due to workload changes.

Question. What is your opinion regarding the need for a cotton analyst in light of the Committee report language directive to collect all cotton acreage data for the boll weevil program?

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Answer. Regarding the collection of acreage data for purposes of administering the Boll Weevil Eradication Program (BWEP), the exact means by which the data should be collected, and by whom, are still under discussion. We want the BWEP to succeed, and I am sure that the necessary data will be collected in a manner which will meet the program's objectives efficiently.

CONSERVATION RESERVE PROGRAM

Question. The Conservation Reserve Program (CRP) sign-up closed on March 28, 1997. How many acres were offered during the sign-up for enrollment in the CRP?

Answer. The preliminary results of the March sign-up are that 301,649 offers were received to enroll 25,639,485.6 acres.

Question. How many of these acres are currently enrolled in the CRP?

Answer. The offers included 18,081,930 acres that are currently in CRP.

Question. What amount is new?

Answer. The offers included 7,557,555 new acres.

Question. When will you notify the farmers that their land has been accepted into the program?

Answer. We anticipate notifying producers whether their CRP offers are accepted by June 2, 1997.

Question. Has Secretary Glickman made a decision whether to enroll the full 19 million acres or stick with the recent announcement that only 17 million acres would be enrolled to save money to fulfill a Clinton campaign promise to buy a mine on the edge of Yellowstone? If not, then when should we expect this announcement?

Answer. A final decision on the purchase of the New World Mine has not yet been made. The Administration is still exploring various options for providing an offset for the costs of this acquisition, and an announcement will be made, hopefully in the near future, when this decision is reached.

INFORMATION TECHNOLOGY

Question. The 1996 FAIR Act limits the use of Commodity Credit Corporation (CCC) funds for operating expenses. It limited the amount for the six year period fiscal year 1997–2002 to \$275 million to be spent on information technologies and automated data processing. The fiscal year 1998 budget assumes expenditures for computer and telecommunications equipment will total \$109 million in fiscal year 1997 and \$104 million in fiscal year 1998. Is FSA currently subject to the Department's moratorium?

Answer. Yes, FSA has been operating under the information technology Investments Moratorium since Deputy Secretary Rominger issued the notification memo on November 12, 1996.

Question. What will these monies be used for exactly?

Answer. The estimates included in the budget were prepared prior to the Secretary's moratorium and do not represent spending with the moratorium in place. The fiscal year 1997 and fiscal year 1998 CCC monies in the budget reflect information technology requirements in support of all FSA program missions. The missions that USDA must execute under the Farm Bill and other recent legislation hold promise for increasing service and reducing cost to the taxpayer. It is equally true that revised responsibilities assigned to the FSA, newly established service centers, crop insurance reform initiatives such as the nationwide non-insured crop disaster assistance program and catastrophic insurance coverage in underserved States, the Conservation Reserve Program, administrative support for the Environmental Quality Incentives Program, and realigned farm loan activities require an ongoing information technology infrastructure to deliver services.

The following major budget categories show how the monies (dollars in thousands) are distributed in the fiscal year 1998 Budget. However, these estimates are subject to subsequent OMB apportionment and reevaluation.

[Dollars in thousands]

	Fiscal year—	
	1997	1998
Hardware and software	\$56,617	\$19,195
Operations and maintenance	21,806	26,418
Systems analysis, programming	15,858	46,211
Studies and training	10,521	4,371
Digital orthophotography	2,000	6,000

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[Dollars in thousands]

	Fiscal year—	
	1997	1998
Other	2,149	1,962
Total	108,951	104,157

FSA State and county offices mainly rely on mid-1980 information technology to deliver program benefits. Recent engineering upgrades to minicomputers supporting the FSA programs have stabilized an important piece of the support structure necessary to sustain operations required by the Farm Bill. However, workstations in excess of 12 years old, along with printers near the end of their useful life, increasingly risk disruptions of service to the customers and will need emergency attention. Approximately 10 percent of each year's budget is for maintenance of the current ADP delivery system in the field. Efforts are underway to replace this technology through the USDA Service Center (SC) Initiative, a collaborative project involving several USDA agencies—NRCS, RD and FSA. CCC fiscal year 1997 funding of \$28.0 million (25.7 percent of the fiscal year 1997 total) is identified towards purchase of a common computing platform for SC's. FSA/CCC's share of other SC initiatives total \$20.5 million (18.6 percent) in fiscal year 1997 and \$35.8 million (33.7 percent) in fiscal year 1998.

During the first quarter of fiscal year 1997, the placement of the technical infrastructure (integrated telephone and data communications) needed to support SC's was started. Target completion of this phase is December 1997. After partner agencies complete business process reengineering/improvement projects which will streamline and improve program delivery, the next phase will involve the establishment of a common computing environment for SC's supporting those business functions. This common computing environment will improve delivery of mission critical programs to FSA and other SC agencies producers, and advance USDA initiatives of reduced customer burden, better customer service, and easier and more timely information sharing. FSA is also providing funding support for the acquisition of digital orthophotography and maximization of data sharing opportunities within the current systems.

Other major efforts supported with this budget are the integration of FSA's divergent program and administrative information technology systems and support, continued operations and programming support for the Processed Commodities Inventory Management System (\$4.75 million each year), modification of the financial management systems of the CCC (approximately \$4 million each year), and continued use of contractor support for other agency systems that support program delivery and require modifications to accommodate the Year 2000 conversion project.

Question. How much did the FSA spend on information technologies and automated data processing in each of the last 5 fiscal years?

Answer. A table showing the actual amount of CCC funds used for equipment and other ADP-related costs for the last 5 years follows.

[The information follows:]

COMMODITY CREDIT CORPORATION
ADMINISTRATIVE EQUIPMENT (REGULAR AND ADP) AND OTHER ADP-RELATED COSTS FUNDED BY
CCC—FISCAL YEARS 1992–96 ACTUALS

[Full dollars]

	Fiscal year—				
	1992 actual	1993 actual	1994 actual	1995 actual	1996 actual
I. Equipment					
Regular equipment—CCC	\$15,346,665	\$6,208,352	\$6,429,364	\$13,716,592	\$7,033,727
ADP equipment—CCC	17,500,139	25,531,707	12,543,782	45,917,735	87,235,770
Total CCC equipment	32,848,804	31,740,059	18,973,146	59,634,327	94,269,497
Info Share equipment				643,759	
Total CCC equipment	32,848,804	31,740,059	18,973,146	60,278,086	94,269,497

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COMMODITY CREDIT CORPORATION—Continued
 ADMINISTRATIVE EQUIPMENT (REGULAR AND ADP) AND OTHER ADP-RELATED COSTS FUNDED BY
 CCC—FISCAL YEARS 1992–96 ACTUALS
 [Full dollars]

	Fiscal year—				
	1992 actual	1993 actual	1994 actual	1995 actual	1996 actual
II. Other ADP-related costs					
Space/site prep./utilities	109,913	109,381	.....	.....	.....
Supplies/transportation	439,657	1,085,131	1,198,131	1,844,226	1,988,662
Commercial services	26,472,158	27,858,848	23,838,608	29,438,603	54,458,169
Inter/intra agency services	743,170	933,159	9,626,048	2,241,000	5,160,828
Kentucky Pilot (SCIT) .....	.....	.....	.....	.....	103,849
Subtotal	27,764,898	29,986,519	34,662,787	33,523,829	61,711,508
Info Share—Other costs:					
Legacy System .....	.....	.....	.....	.....	.....
Fast Track .....	.....	.....	.....	959,403	.....
Subtotal .....	.....	.....	.....	959,403	.....
Total other costs	27,764,898	29,986,519	34,662,787	34,483,232	61,711,508
Grand total, CCC	60,613,702	61,726,578	53,635,933	94,761,318	155,981,005

NON-INSURED ASSISTANCE PROGRAM

Question. Since the inception of the non-insured assistance program (NAP), problems have arisen regarding the geographic area used to determine a loss and trigger payment, the delivery of payments once a disaster is declared, and a general misunderstanding of the program. What is the status of NAP?

Answer. FSA has received 979 NAP area requests/recommendations for the 1995 and 1996 crop years. Of these, 705 have been approved, 105 have been disapproved, 73 were either withdrawn or canceled, and 96 NAP area recommendations remain on hand.

Question. Has the agency taken any action to address the problems mentioned above?

Answer. FSA issued multiple program directives to State and county offices in 1996 to provide updated instructions that addressed new program provisions as well as issues raised by field offices. Many of these directives provided clarifications to procedures for assembling NAP area recommendations and addressed crop and producer eligibility issues.

FSA also provided on-going training to State office specialists by rotating these personnel into headquarters on two-week temporary assignments. This initiative had a significant impact on improving the knowledge and expertise of FSA staff who were delivering the program at the field office level. FSA issued a new NAP handbook, 1-NAP, on March 28, 1997. In addition, FSA is conducting national NAP training April 8 through April 11, 1997. State offices will provide subsequent training to county office personnel immediately following the national training sessions.

Handbook 1-NAP and the national training were critically needed. Improvements in the quality of analyses and documentation provided in support of NAP area requests are already apparent. The instruction and training provided to FSA personnel will help expedite NAP area recommendations and delivery of the program.

Notwithstanding the progress made over the past 12 months, there is unfinished work. FSA plans to provide improved automated tools at all levels that will support information management initiatives, perform computations of eligibility, and process loss claims, applications for payment, and annually reported acreage and production data.

One difference between NAP and the former ad hoc disaster payment programs is "area eligibility." Prior to 1995, an individual producer of a crop suffering a loss due to eligible disaster conditions was basically eligible for payment consideration without regard to whether the crop, and possibly other disinterested producers, suffered an aggregate area loss in excess of some threshold. The NAP concept of extending disaster-type assistance only in cases where a widespread catastrophic loss

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occurred in a geographical area was somewhat new to many producers and FSA offices. We believe employees and producers are becoming more familiar with this concept.

QUESTIONS SUBMITTED BY SENATOR BURNS

FARM LOAN DELINQUENCIES

Question. It is my understanding that a moratorium is in effect on farm foreclosures. What I would like to know is the number of farm loans and dollar amounts that are delinquent for one year, five years, ten years, fifteen years, and over fifteen years?

Answer. We are unable to provide the information in the detail you requested. However, the following reflects delinquency status of direct loans as of March 31, 1997. Number of borrowers: One payment delinquent, 18,252; two payments delinquent, 2,946; and more than two payments delinquent, 4,756.

Question. As a supporter of the family farmer, I do have some concern over the number of delinquent loans. What kind of message does this send to farmers who are paying their loans or to other government borrowers who pay their loans?

Answer. The FSA is sending this message to its borrowers: we expect repayment of funds lent to you. We will work with borrowers who are experiencing a temporary inability to make regular repayments through circumstances that are not their fault.

Question. When will the moratorium be lifted and what plans does your agency have for loans that are multi-year delinquent?

Answer. FSA does not have a moratorium on foreclosures. The Secretary has suspended foreclosure sales until a review is completed to make sure that no program inconsistencies or discrimination is found. This demonstrates that the Agency is performing the task assigned to it by Congress in making every effort to eliminate any inequitable treatment in the delivery of its programs.

Under current statute, the Agency is required to notify all borrowers who are 60 days delinquent of their right to apply for Primary Loan Servicing to resolve those delinquencies within the Agency's authority to reschedule, defer, or write down the loans. If their operations cannot show a possibility of success even with these options, they are offered the opportunity to purchase their debt at the current market value of the security. Only after these options have been considered does the law allow the Agency to proceed to foreclosure. With the right to appeal at every step of the process, this procedure can take several years. When all other possibilities are exhausted, the Agency does pursue foreclosure in accordance with the laws of the State in which the borrower lives.

Question. When and how does your agency determine that a loan is so seriously delinquent that there is no possibility of repayment?

Answer. If a delinquent loan cannot be brought current through rescheduling, deferral or write down, or debt cancellation in exchange for a conservation contract, the Agency assumes that repayment is not possible, and the borrower is provided the opportunity to purchase it at the market value of the security. If this cannot be accomplished, other methods of debt settlement are discussed with the borrower and then foreclosure is pursued, if necessary.

USE OF AUCTIONS

Question. Your agency has been reluctant to use auctions when selling foreclosed farms; what is your reasoning for not using auctions more often?

Answer. Federal law requires the Agency to advertise its inventory farms suitable for agriculture to new and beginning farmers at their current market value, based on an FSA appraisal. If there is more than one such applicant, the winner is chosen by a random drawing; no bidding is allowed between these applicants. Auctions, sealed bids and other methods of sale can be and are pursued only if no new or beginning farmer expresses an interest in purchasing the farm.

Question. I have been told that before a farm property can be sold at auction, the use of an auction must be approved by headquarters in Washington. Other sales methods do not have to be approved by Washington, why is that requirement in place for auctions?

Answer. There is no such requirement. Auctions may be used at the option of the respective State Office, as long as no new and beginning farmers have applied or been found qualified to purchase the farm. If the cost of an auction firm exceeds the State's authority to contract for small purchases, the sale would require ap-

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proval from Washington for contracting reasons, but not for the use of an auction as such.

CRP AND CROWN BUTTE

Question. In questioning it was stated that there would be no impact on the farmer in the use of CRP funds to pay for Crown Butte. I would like to hear your reasoning on this and how you would explain that to a farmer that is expecting payment of CRP land this year, that might lose out due to this action?

Answer. The proposal has no impact on acreage currently under contract but would delay the enrollment of acreage for one year. Since all offers to participate in CRP are evaluated in comparison to the environmental benefits and costs of other offers, whether or not an offer is accepted is primarily dependent on the quality of the offer.

FSA FIELD OFFICE CLOSURES AND PERSONNEL CHANGES

Question. In the hearing you stated that it is not proper to have county committee personnel overseeing Federal personnel. Is this law, and what would be necessary to make the current operation legal?

Answer. The Federal Crop Insurance Reform and Department of Agriculture Reorganization Act of 1994 provides that Federal and non-Federal employees can be used interchangeably, but a non-Federal employee cannot supervise a Federal employee. Operating a dual employee delivery system at the county level has been difficult. Recently, the USDA Civil Rights Action Team (CRAT) recommended that the FSA county committee system be modernized by converting all county non-Federal positions to Federal status. The Secretary will be submitting a legislative package later this year to Congress supporting the conversion of all FSA non-Federal positions to Federal status.

Question. I can understand the need for closing offices in areas of high concentration, but does the agency propose closing offices in highly rural areas with long distances between offices, and what is the rationale for these closures?

Answer. Workload levels reflect the staffing resource needs at a given location and not necessarily whether a physical presence is needed. A large workload office is generally more efficient than a small workload office because of the numbers of employees available to perform specialized services and the general efficiencies associated with volume transactions. A criterion such as a minimum 25 mile limit between offices reflects an assumption associated with all producers having reasonable access to service. In the 1930's when most USDA offices were established, local transportation was limited. Today, with the significant improvements in transportation and the technological capabilities available, the distance a producer would travel to receive services can be increased without any significant hardship. Workload is certainly an important factor in determining staff levels for field offices and will be considered in FSA's analysis of ways it will operate within budget realities and how it will apply staff reductions. However, other factors must also be considered to assure that USDA provides customers the best service possible. Any decisions to close USDA field offices or reduce an agency presence within a USDA service center must be done in coordination with the other agencies involved, including Rural Development and the Natural Resources Conservation Service.

QUESTIONS SUBMITTED BY SENATOR BUMPERS

DISASTER ASSISTANCE

Question. Do the estimates in the supplemental request for the Emergency Conservation Program (ECP) reflect losses from tornadoes in Arkansas, flooding along the Ohio River, and other events that have occurred since March 1st?

Answer. On March 19, 1997, the President submitted a \$20 million supplemental request to Congress for the Emergency Conservation Program and a request for an additional \$17 million in contingency funding. The estimates partially reflect losses due to natural disasters since March 1st. The amount being requested will fund losses in the western States due to the January flooding but fund only part of the pending requests due to tornado damage in Arkansas and flood damage along the Ohio River. Estimates related to flooding in North Dakota, South Dakota, and Minnesota cannot be made until the flood waters have receded.

Question. Do the estimates include anticipated damage from the snow melt in the upper plains?

Answer. The \$17 million contingency was for "spring flooding," including flooding due to snow melt.

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Question. Do you believe the contingency amounts included in the request will be adequate, especially given the fact that these estimates were made far in advance of receding flood waters or more recent storm events?

Answer. We don't really know the magnitude of the need at this time, given the more recent storms occurring in various locations across the country.

EMERGENCY FARM LOANS

Question. I further note the supplemental request includes no funding for emergency farm credit. Do you think the carryover of emergency farm credit will be adequate given the magnitude of current and anticipated losses?

Answer. The supplemental request did not include additional funding for FSA's emergency loan program since, at the time it was prepared, FSA believed that it had adequate funds available to cover the flooding in the Northwest assuming no further widespread disasters occurred. The recent blizzards and flooding in the Midwest could not have been anticipated. Given the magnitude of these new disasters, the remaining emergency loan funds will not be sufficient to meet the demand for loans for the remainder of this fiscal year.

Question. Could you please provide State by State estimates of identified and projected needs for all emergency assistance under the jurisdiction of your agency relating to those events?

Answer. It is too early in the disaster recovery process for many areas to project the need for emergency assistance for the remainder of the year. We are still assessing the scope of potential loan demand.

DISASTER CONTINGENCY RESERVE

Question. Rather than requesting an amount for ECP in fiscal year 1998, you suggest the establishment of a contingency reserve for disaster assistance. Who would have the authority to use this reserve and how would it be triggered?

Answer. The President's budget proposes that the Congress appropriate \$5.8 billion as a contingency fund for use through specified disaster assistance programs including the Emergency Conservation Program. The proposed contingency fund would be administered by the Office of Management and Budget on behalf of the President, but only the President could make funds available. The release of any amount of the contingency fund could not occur until 15 days after the President has officially notified the Congress. This built-in constraint is designed to give Congress time to respond, but also ensures that the Government will be able to assist communities stricken by a natural or other disaster in a timely way.

Question. Which appropriations subcommittee would likely be responsible for funding?

Answer. Since the contingency funds would be appropriated to the President, we assume that the funding request would be considered by the House and Senate Appropriations Subcommittees on Treasury, Postal Service, and General Government.

SECTION 11 REIMBURSABLES

CRP

Question. You indicate you will notify producers by mid-June of CRP enrollments using NRCS technical assistance. Do you intend to reimburse NRCS for that service using section 11 authorities?

Answer. In fiscal year 1997, no Section 11 CCC funds will be used to pay CRP technical assistance for NRCS. Unobligated funds from the appropriated CRP account will be for used for NRCS and Forest Service CRP technical assistance until the funds are fully expended.

Question. Would you be able to enroll those areas if NRCS was not provided funds through this subcommittee for any technical assistance for those programs converted to direct spending from the CCC?

Answer. As noted above, the source of funding for NRCS technical assistance for the fiscal year 1997 CRP program is unobligated CRP appropriated funds. NRCS would be unable to provide the necessary technical support needed to implement the CRP without any technical assistance funds.

Question. Is the fact that the fiscal year 1997 and 1998 estimates for section 11 transfers are below the 1995 amounts an indication that the conservation technical assistance is not needed to implement CRP and WRP and similarly situated programs as much as in previous years? If so, how can that be true in light of the new "environmental benefits" test for CRP which, I would imagine, will require an extensive analysis by NRCS?

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Answer. The budget projects annual spending under the cap on Section 11 reimbursable agreements will total \$41.2 million in fiscal year 1997 and \$35.6 million in fiscal year 1998. CCC obligations for Section 11 activities in fiscal year 1995 were \$45.6 million. The fiscal year 1997 level is below fiscal year 1995 because CRP and Wildlife Habitat Incentives Program technical assistance costs in fiscal year 1997 are being funded from unobligated funds in the CRP appropriated account and not Section 11 transfers. Fiscal year 1997 CCC transfers would have been at the 1995 level without this ability to use CRP unobligated funds for technical assistance costs in fiscal year 1997. The fiscal year 1998 level of \$35.6 million is \$10 million below the fiscal year 1995 level because of the proposed shift in FAS' Emerging Markets Technical Assistance program from the CCC Section 11 reimbursable agreement to an FAS appropriation. In subsequent years, the full \$45.6 million will be available for expenses, with the Emerging Markets funded elsewhere.

Question. You estimate that you have used \$83 million in carryover funds from CRP to fund the technical assistance portion of that program and that you estimate you will use \$24 million in carryover funds in fiscal year 1998. How much is left in the CRP carryover account?

Answer. At the end of fiscal year 1996, there was approximately \$111 million in unobligated funds in the CRP appropriated account. The budget also projects that \$4 million in refunds of prior year payments will be credited to the CRP account in both fiscal years 1997 and 1998. Only a small amount of funds will be left in the CRP account after 1998 since \$12.5 million will also be used for the Wildlife Habitat Incentives Program as authorized by Section 387(c) of the Federal Agriculture Improvement and Reform Act of 1996.

Question. What do you intend to use for this purpose when the carryover funds are depleted?

Answer. It is estimated that a very small amount of carryover funds from the CRP account (resulting from refunds of prior year payments) will be used in fiscal years 1999 through 2002 to pay CRP technical assistance costs. Section 11 funds will be used to pay technical assistance as long as the total level of CCC Section 11 transfers does not exceed \$45.6 million. In some years it may be possible for technical assistance needs to exceed available funding.

FLOOD RISK REDUCTION PROGRAM

Question. What has been your experience with the Flood Risk Reduction Program in fiscal year 1997?

Answer. Regulations are currently being drafted to seek comments on program implementation. It is anticipated that the program will be offered beginning October 1, 1997.

Question. Why are you not providing an estimate for fiscal year 1998?

Answer. The funding source is the CCC AMTA funding. Participants earn 95 percent of their AMTA payments in one up-front payment. The President's Budget assumed that the one up-front payment would be made in fiscal year 1997 with no payments in subsequent years. However, based on current estimates, the one up-front payment will be made in fiscal year 1998 instead of fiscal year 1997. FSA economists estimate 4.7 million acres classified as frequently flooded to be eligible for the Flood Risk Reduction Program. Flood risk reduction payments in fiscal year 1998 would be about \$266 million, offset by reductions in production flexibility contract payments of about \$284 million during fiscal years 1998-2002.

Question. Why was this program not assigned to NRCS along with other conservation programs?

Answer. The Flood Risk Reduction Program (FRRP) is not a conservation program. The Secretary assigned FSA the responsibility of administering the FRRP because FRRP contracts are offered as an alternative only to those producers with production flexibility contracts (PFC) administered by FSA under the Agricultural Market Transition Act. FRRP payments are directly correlated to the PFC payments issued by the Commodity Credit Corporation that the producer would otherwise receive. Also, the majority of program benefits that FRRP participants are required to forgo are administered by FSA. FRRP participants must meet the highly erodible land and wetland conservation provisions. However, there are no other conserving use or other conservation requirements for producers who enroll in FRRP.

BOLL WEEVIL ERADICATION

Question. What is the status of implementing the Boll Weevil Loan Program for fiscal year 1997?

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Answer. It is currently projected that FSA will begin accepting applications for the Boll Weevil Eradication Loan program in the next 45 days provided that no unforeseen circumstances delay its implementation.

Question. Why did FSA not include this program in the budget request for fiscal year 1998?

Answer. With regard to fiscal year 1998 funding, it is the Department's understanding that the Boll Weevil Eradication Loan program was not intended to replace the cost-share grants provided by APHIS to the foundations that operate the boll weevil program at the State level. Rather, the program was intended to allow the foundations to finance their share of the program costs, at a minimal Federal subsidy cost. In the past, the Department has worked with some of the foundations in response to inquiries about using the business and industry guaranteed loan program to assist in obtaining credit from private lenders. It remains the Department's position that the credit needs of the boll weevil eradication program can be adequately addressed through existing programs, such as the business and industry guaranteed loan program, and that there is no reason to maintain a separate program for this purpose.

FARM CREDIT

Question. Since enactment of Beginning Farmer legislation earlier this decade, what has been the rate of graduation?

Answer. Regulations for implementing the graduation provisions of the Beginning Farmer legislation went into effect last year. Between October 1, 1996, and March 31, 1997, a total of 2,517 borrowers has graduated to commercial credit. This figure represents some duplication for individual borrowers with more than one type of loan, such as an operating loan and a farm ownership loan.

LOAN SUBSIDY RATES

Question. You mentioned you expect a reduced cost of farm credit programs due to efforts to reduce loan delinquencies. Do you know if CBO is willing to translate those efforts into lower subsidy rates?

Answer. The Agency is unaware of any CBO requirements related to subsidy rates. The subsidy rates are calculated following OMB's requirements as stated in OMB Circular A-11, Preparation and Submission of Budget Estimates, dated June 1996. The calculation of loan subsidy costs is based on two factors: (1) explicit technical terms and conditions, and (2) the Treasury discount interest rate. Loan delinquencies are only one of many explicit technical terms and conditions used to calculate the subsidy rate. The Treasury discount rate is provided directly by OMB, and all explicit technical terms and conditions, including reduced loan delinquencies, are approved by OMB before use in the President's Budget.

Question. Also, recent shifts in interest rates indicate that the program level per dollar of BA may be falling. In order to prevent program levels from falling below your budget estimates, will you provide this subcommittee current reestimates of loan subsidy costs to better coordinate the effective program level in these accounts for the coming fiscal year?

Answer. Although the Agency could, with OMB approval, provide current reestimates for fiscal year 1998 loan subsidy costs, any revision to the Treasury interest rate component would again be an estimate. The actual program level for fiscal year 1998 will not be known until the Treasury interest rates in effect on October 1 are published through the Commerce Economic Bulletin Board.

Explicit technical terms and conditions used in the President's Budget to calculate loan subsidy costs cannot be changed except by permission of OMB and only to reflect enacted legislation and any regulatory action which affects the making or guaranteeing of loans. Currently, the only change allowed between the subsidy cost estimated for the President's Budget and the actual subsidy cost calculated on October 1 is the difference between the Treasury discount rate estimated by OMB for budget formulation and the Treasury rate in effect on October 1, 1997.

STATE MEDIATION PROGRAM

Question. Can you document the Federal savings achieved by the State Mediation Program, on an annual basis, since the program was first established?

Answer. Federal savings achieved by the State Mediation Program remains a difficult area to assess. Depending on what assumptions are used, the amount can vary greatly. Savings to the Federal Government is apparent when mediation results in a restructured loan which offers a greater return than a net recovery buy out. Mediation also saves staff time and effort by quickly resolving the dispute outside of the appeals or court system. However, these savings are difficult to quantify

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because the costs can vary substantially depending on the nature and complexity of the issues involved.

The Marketing and Economics Division at the Alabama Department of Agriculture and Industries reported in its September 30, 1995, annual report that their benefit-to-cost ratio for agricultural mediation is estimated to be \$8.00 in benefits for every \$1.00 of mediation costs. Researchers at Texas Tech University studying the Texas Agricultural Loan Mediation program reported that creditors in Texas received an estimated \$4.14 in benefits for every \$1.00 in providing mediation services. The Oregon Department of Agriculture reported in its September 1995 annual report that the benefit-to-cost ratio was estimated at \$2.56 to \$1.00 for mediation program expenditures.

Annual funding has been \$2 to \$3 million for the State Mediation Program. A high estimate of net annual Federal savings, using the Alabama benefit-to-cost ratio of 8 to 1 and an annual funding level of \$3 million, is \$21 million. A low estimate of net annual Federal savings, using the Oregon benefit-to-cost ratio of 2.56 to 1 and an annual funding level of \$2 million, is \$3.12 million. Legal fees and costs for administering or selling a property through foreclosure or bankruptcy and the added costs of maintaining a non-performing asset on the books are often avoided by mediation but are difficult to estimate and are not included in these estimates.

Question. Are you aware of the OIG report released to this subcommittee on March 4, 1997?

Answer. Yes, we are.

Question. I understand that one of the findings of the OIG was that State agencies administering this program would not release mediation documents when, in fact, State statutes clearly provide for the confidentiality of such records and provide for a means, through the courts, for parties such as OIG to obtain them. To your knowledge, did OIG make attempts to secure records pursuant to the means provided by law?

Answer. OIG conducted audits of State mediation programs in Michigan, Minnesota, North Dakota, and Texas. Program officials in these States denied OIG access to certain mediation records considered confidential under their State laws. State laws governing mediation confidentiality vary, but most State programs are subject to such laws. OIG has not pursued such records by issuing subpoenas under its subpoena authority. State mediation officials have advised FSA that they will comply with any court order to release mediation records to OIG, as this will satisfy their State confidentiality statutes.

Question. Why is confidentiality important to the integrity of the mediation process?

Answer. Confidentiality in the mediation process is very important. The basic concept of mediation is to allow parties a free and open forum in which to air differences without the fear of retaliation. Confidentiality is the cornerstone of successful mediation in each State and without this assurance, participants cannot feel comfortable in expressing their feelings and discussing personal information.

Question. Has your agency had any difficulty obtaining necessary information from the State administering agencies?

Answer. Each State is able to generate a list of producers with whom FSA has entered into mediation. The case files of each of these producers are available for USDA review in the FSA county office. FSA believes that these records will allow USDA to evaluate program actions resulting from the mediation process.

The structures and formats of State programs differ greatly and were designed to reflect individual State needs. FSA has worked and continues to work with State mediation officials to improve the information reporting on mediation services. Certain data that is measurable and common to all State programs will be gathered and reported to USDA to enable better tracking of overall program effectiveness, efficiency, and accountability. Reporting requirements will need consideration, so as not to overburden State programs with excessive paperwork which might divert scarce funds and staff from the field work of providing the actual mediation services.

CCC REIMBURSEMENT FOR NET LOSSES

ACTUAL STATUS OF CCC LOSSES

Question. Since the reimbursement for net losses in fiscal year 1999 is estimated at \$9 billion (compared to \$784 million for fiscal year 1998) due to changing the reimbursement period from a one-year to a two-year timeframe, what does this really tell us about the current state of net losses?

Answer. In recent years, the appropriations to CCC have been gradually reducing the large balances of unreimbursed losses from previous years. Cumulative unreim-

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bursed realized losses decreased from \$26.9 billion at the end of fiscal year 1993 to \$2.3 billion at the end of fiscal year 1996. The fiscal year 1996 appropriation completed this process by fully restoring all cumulative unreimbursed realized losses through fiscal year 1995 and a portion of fiscal year 1996 losses. In prior years, the request for appropriations to reimburse the CCC for net realized losses has been based on an estimate of losses incurred one year earlier which have not been previously reimbursed. The estimate could exceed or fall short of the actual amount of loss. Beginning in 1998, in response to OIG recommendations, the request for appropriations to reimburse CCC for net realized losses will cover the actual amount of all unreimbursed losses incurred two years earlier. The 1998 budget requests \$784 million for the balance of 1996 losses not reimbursed through appropriations in 1996 and 1997. 1996 losses totaled \$7.8 billion, of which \$5.5 billion was restored by appropriations in 1996 and \$1.5 billion was restored by appropriations in 1997, leaving a balance of \$784 million to be restored in 1998. Appropriations to reimburse CCC for net realized losses incurred in 1997, currently estimated to total \$9.002 billion, will be requested in the 1999 budget at their actual recorded level.

Question. In other words, what would the fiscal year 1998 estimate be if we continue a one-year basis for reimbursements?

Answer. The fiscal year 1998 estimate would be \$9.786 billion if we continued a one-year basis for reimbursements. This would include \$784 million for the balance of 1996 losses not reimbursed through appropriations in 1996 and 1997, and \$9.002 billion for net realized losses estimated to be incurred in fiscal year 1997. While this approximate level would keep the Corporation essentially fully reimbursed at the time of appropriation, CCC's available borrowing authority will continue to be adequate to finance expected expenditures on the two-year basis for loss reimbursement.

HIGHER COST OF FREEDOM TO FARM

Question. Have you been able to determine what your fiscal year 1997 and fiscal year 1998 outlays from CCC would have been without the changes in the 1996 Farm Bill, specifically the so-called Freedom To Farm payments?

Answer. The 1996 farm bill made profound changes in the way direct payments are made to producers. First, production flexibility contract payments under the new farm bill are no longer tied to market prices and are determined by amounts specified in law. Second, crop payments are now made in 1 fiscal year, unlike under the 1990 farm bill provisions when payments were issued over 2 or more fiscal years.

Due to the timing differences of deficiency payments under an extended 1990 farm bill versus the production flexibility contract payments, a comparison of spending by fiscal years would be misleading. Therefore, we have estimated what direct payment outlays would have been under an extension of the 1990 farm bill provisions for the 1996 and 1997 crops.

In projecting what the costs of an extension might have been, certain assumptions were made. We assumed that prices under an extension of the 1990 farm bill would not be much different than current prices except for rice, and, therefore, prices were set to equal the prices in the May 1997 "World Agriculture Supply and Demand Estimates" except that we used internal price projections for cotton because the Department is prohibited from publishing cotton price projections. Rice prices were lowered about 15 percent because additional acreage would have been planted under an extension of previous law. Acreage reduction percentages were assumed to be zero for all commodities.

Production flexibility contract payments for 1996 equaled about \$5.4 billion. If an extension of the 1990 farm bill provisions were applicable to the 1996 crop, deficiency payments would have been less than \$0.7 billion, about \$4.7 billion less than the contract payments. Deficiency payments for wheat, corn, barley and oats would have been zero because farm prices exceeded their target prices, but payments would have been made for rice, cotton and sorghum.

Production flexibility contract payments for 1997 are about \$6.4 billion. 1997 crop deficiency payments would have been about \$2.7 billion, \$3.7 billion less than the contract payments. Deficiency payments would have been issued for all crops, except oats.

FARM SAFETY NET—EXTENSION OF COMMODITY LOANS

Question. You want discretionary authority to extend commodity loans by 6 months. Historically, cotton loans have been extended for longer periods than other commodities. Do you intend to provide for this historical trend to continue?

Answer. Under current law, we have no authority to extend any crop loans. To provide a safety net for farmers under adverse price circumstances, we proposed

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that the Secretary be granted authority to extend loans for cotton and other commodities for 6 months. Should that proposal be enacted, we would have no authority to treat cotton any differently from other commodities.

FARM SAFETY NET—FRUIT AND VEGETABLE PLANTING FLEXIBILITY

Question. Why do you plan to change the flexibility provisions for fruit and vegetable planting on transition acres?

Answer. We believe a legislative change permitting the planting of fruits and vegetables (FAV's) following a contract commodity that is prevented from being planted or has failed due to adverse weather (ghost-crop provision) without a reduction in AMTA payment is warranted. Enactment of this change would merely allow producers to regain an option that had been available to them in 1995. We do not believe that FAV producers would be unfairly disadvantaged by the restoration of this provision.

Question. Does this reflect a change in your position during the 1996 farm bill debate?

Answer. No.

Question. What effect will this change have on traditional fruit and vegetable producers?

Answer. None. Since the proposal is an extension of law that was in place prior to 1996, there would be no impact on fruit and vegetable plantings.

SALARIES AND EXPENSES (OFFICE CLOSINGS)

Question. Since one of the goals of USDA reorganization has been to reduce more of the headquarters positions than those in the field, why is the percentage of reduction of non-Federal (county) employees so much larger than the proposed reductions for Federal employees?

Answer. The FSA has been making staffing reductions over the past several years. From fiscal year 1993 to the current fiscal year 1997, the Agency has reduced total staffing 21 percent. These reductions reflect an overall 19 percent reduction in Federal staff years, including 27 percent at Headquarters, and a 22 percent reduction in non-Federal staff years. Overall, the Headquarters staff reduction percentage exceeds the field staff reduction. As you stated, fiscal year 1998 and the years through fiscal year 2002 reflect major proposed decreases in FSA non-Federal staff years. The fiscal year 1998 Budget proposes a reduction of 2,119 staff years for fiscal year 1998, of which 269 are Federal staff years and 1,850 are non-Federal staff years. It should be noted that although non-Federal staffing is being reduced by the programmatic impacts of the 1996 Act, rather than reorganization, the projected fiscal year 1998 Federal work force of 5,877 includes approximately 2,265 employees at the county level performing Agricultural Credit program workload for direct and guaranteed loans. Furthermore, there are an additional 1,463 Federal FTE's at the State office level, including personnel that support farm credit activities as well as CCC activities, that perform program oversight, supervisory, and other support functions. In general then, Federal should be not be construed to mean Headquarters rather than field personnel.

Question. Is this a reflection of action already taken to reduce Federal positions?

Answer. No. Although I indicated earlier that relatively large reductions in Federal employment, especially at Headquarters, have taken place, the proposed reduction of non-Federal employees in 1998 is not an attempt to "catch up" on any ratio. Rather, it simply reflects that earlier years' reductions were driven by reorganization and government-wide streamlining objectives, while the more recent reductions in 1996 and 1997 (and the proposals for 1998) are driven solely by the programmatic impacts of the 1996 Farm Bill, which impacts employment more directly at the service delivery point.

Question. Since you now have buyout authority, why do you anticipate a further Reduction In Force of 1,589 employees?

Answer. The estimate of a further reduction in force of 1,589 employees reflects the assumption that reductions-in-force will make up 75 percent of the total 2,119 separations in the Budget, since the number of employees eligible for buyouts has declined due to the major use of buyouts within the Agency in 1995 and early 1997.

Question. How will that RIF be achieved?

Answer. No specific plans have been approved concerning the RIF. However, we will be formulating options and involving our employee unions soon in order to have approved procedures in place since the funding in the 1998 Budget assumes salary savings begin early in the fiscal year.

Question. How will you determine who has the benefit of the buyout and who will be subject to the RIF?

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Answer. The Farm Service Agency will use buyouts to reduce the number of employees who must be involuntarily separated. However, the number of those eligible has declined substantially due to two earlier buyouts. The Agency will soon be formulating its buyout plan for fiscal year 1998 in concert with RIF procedures. It is anticipated that most employees will be offered the opportunity to apply for a buyout. However, employees in certain job categories may not be selected for buyouts due to the critical nature of their position. Those critical positions will also not be targeted for RIF's.

COUNTY OFFICE WORKLOAD

Question. Will there not be regional differences in FSA county office workload, especially when comparing areas where there is substantial landlord-tenant activity and other areas where there is historically a single owner-operator where there are likely to be fewer program changes over the course of the 1996 Farm Bill?

Answer. Production flexibility contract payment shares on a leased farm may only be designated for years covered by the lease. This is true whether or not the same tenant ultimately remains on the farm. Most leases are annual leases.

Although producers with leases that do not cover the life of the contract can only designate payment shares for the years covered by the lease, they are only required to update other forms or records if there are changes in their farming operations. It is possible that regional differences in the amount of tenant turnover and other changes in farming operations from year to year may ultimately be identifiable. However, since 1996 was the first year of the program, there is insufficient information available at this time to determine regional differences regarding landlord-tenant activity.

Question. Would you please provide information to explain, on a regional basis, what the current and projected workload will be among county FSA offices?

Answer. Tobacco and peanut States would have a constant workload because the 1996 Act did not reduce the workload associated with tobacco or peanuts. In addition, States that have significant numbers of producers who plant fruits or vegetables and are participating in the AMTA Program would have greater activity concerning acre-for-acre fruit and vegetable payment reductions. Other workload, such as workload associated with conservation programs, would only vary by regions if eligibility or qualification for the program is specific to a region or otherwise pertains only to certain regions.

Question. Do your projections for staff reductions exceed the levels recommended by GAO in order to meet the mandates of the 1996 Farm Bill and if so, why?

Answer. No, our projected staff-year reductions approximated GAO's. The basis of the GAO report is that the new farm programs enacted in the 1996 Act will reduce FSA workload. We agree that, generally, this is true. For example, the pre-Farm Bill fiscal year 1997 President's Budget estimates prepared in January 1996 included county workload staffing needs of 13,224 FTE's for fiscal year 1996. Following passage of the 1996 Act in April 1996, FSA performed an internal workload analysis that showed lower staffing needs for 1996, down to an estimated 12,835 county office FTE's. The actual FTE's worked for 1996 were 12,738. FSA's analysis also showed declining workload for fiscal year 1997 and for fiscal year 1998, but stabilizing thereafter. Beyond fiscal year 1998, the Administration believes further workload reductions can be achieved, and, as mentioned, we will be initiating an independent study this year of how such efficiencies might be accomplished.

Question. You suggest the creation of an outside contract to study further streamlining of FSA and NRCS. Where will the funding come from to pay for that study?

Answer. The funding for the study is being negotiated by the Department and the agencies involved in the study.

DEFERRAL OF CRP ENROLLMENTS

Question. The administration has proposed deferring for one year the enrollment of 2 million acres of the CRP in order to achieve savings necessary to resolve an issue regarding the Crown Butte mine in Montana. What effect would this have on the CRP program?

Answer. The proposal, if approved, would defer, for 1 year, the opportunity to enroll 2 million acres in the CRP. This action only serves to postpone the sign-up of a small portion of the projected acreage, not to reduce the size of the program. The Administration's goal of enrolling 36 million acres by the year 2000 will not change.

Question. Is it likely that this action would result in the termination of any CRP acreage enrollment that would otherwise have been re-enrolled in 1997?

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Answer. Assuming 17 million acres are enrolled, at least 1 million acres under contract now would be impacted. The actual impact for acreage under existing contracts could be greater based on the competitive nature of the program.

Question. Because of the flooding experienced now in many parts of the country, would it be possible to defer the 2 million CRP acres and, instead, provide farmers greater participation in fiscal year 1997 through the Flood Risk Reduction Program and still achieve your budget objective?

Answer. Expansion of the Flood Risk Reduction Program (FRRP) in fiscal year 1997 is not considered a viable option because it is anticipated that the program will not be offered until October 1, 1997. The funding source is from the CCC AMTA funding, and there is not a separate appropriation for the FRRP. Participants earn 95 percent of their AMTA payments in one up-front payment. In sum, this concept would not increase producer participation and achieve the Administration's budget objective.

QUESTION SUBMITTED BY SENATOR KOHL

Question. The 1996 FAIR Act included provisions that have made it impossible for farmers to receive any new Federal farm loans, if they had ever had previous loans restructured. In many cases this seems inappropriate, especially when it was the Federal Government itself that was encouraging farmers to restructure their loans during the 1980's. I have been particularly alarmed to learn that some of my constituents in Wisconsin have even been denied disaster loans as a result of the new farm bill provisions. Given these concerns, will you be requesting any changes in these 1996 FAIR Act provisions when the Administration sends its proposed farm bill technical corrections to Congress? When can we expect to see those proposed technical corrections?

Answer. Borrowers who have had FSA loans restructured, but have had no debt forgiveness are not precluded from receiving additional loans. Provisions of the 1996 Act prohibit making direct or guaranteed loans to anyone who has previously received debt forgiveness, except for recipients of debt write down, who are only eligible for annual production loans. The Department supports changes to moderate this unreasonably harsh limitation. The Department will propose legislation to allow recipients of debt forgiveness who have reestablished an acceptable credit record over a period of time to recover eligibility for FSA loans.

FOREIGN AGRICULTURAL SERVICE

QUESTIONS SUBMITTED BY SENATOR COCHRAN

MARKET ACCESS PROGRAM

Question. Changes have been made in the Market Access Program (MAP) to make it more targeted and to increase small business participation in the program. Secretary Glickman indicated in his testimony before this Committee that "additional program improvements have recently been made which are designed to broaden participation, clarify program participation criteria, strengthen evaluation and accountability, and simplify program requirements for participants." Can you briefly summarize the changes made and the reasons for those changes.

Answer. Consistent with the Administration's commitment to streamline government programs, new MAP regulations were published on February 1, 1995, that increased flexibility and simplified program requirements for the participants. The MAP regulations reflect public comments and changes made by the Omnibus Budget Reconciliation Act of 1993, and most recently, the Federal Agriculture Improvement and Reform Act of 1996. Specific changes in the MAP include:

- published the evaluation criteria and the corresponding percentage weight factors for allocating funds;
- eliminated the requirement for an applicant to show that the represented U.S. agricultural commodity faces an unfair trade practice in an overseas market;
- give priority assistance in the allocation of brand promotion funding to small businesses and cooperatives;
- established procedures for appealing compliance findings;
- simplified contracting standards and procedures;
- extended the time period during which expense claims may be submitted for reimbursement; and
- liberalized U.S. origin identification requirements to permit the use of generally recognized states or regions within the U.S.

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In addition, the Department has implemented the following improvements administratively to streamline and expedite program management:

- simplified reporting requirements for end-of-year contributions;
- delegated to FAS Commodity Division Directors the authority to approve routine administrative issues;
- eliminated the requirement for formal amendments to effect changes in approved activity plans other than those that are deemed “significant”;
- delegated authority to the State Regional Trade Groups to approve brand company plans valued at no more than \$50,000, thus expediting the approvals for primarily small companies participating in the MAP;
- eliminated the need for all brand companies, 80 percent of which are classified as “small,” to track and report expenditures by multiple cost categories for brand activities;

In response to GAO and the Government Performance and Results Act (GPRA), the MAP regulations were also tightened with regard to funding additionality and evaluation. Participants must certify and demonstrate that any MAP funds received will supplement, but not supplant, any private or third party contributions to the program. With regard to evaluation, FAS allocates funds in a manner that effectively supports the decision-making initiatives of the GPRA. In addition, each participant is required to conduct an annual program evaluation to determine the effectiveness of the participant’s strategy in meeting overall goals. Participants must identify goals to be met within a specified time, a schedule of measurable milestones for gauging success, and plans for achievement of results at regular intervals. The evaluation results are analyzed by FAS and help guide the development and scope of a participant’s program and direct changes in program strategy or design.

CCC FUNDS SHIFT/COOPERATOR PROGRAM

Question. The fiscal year 1998 budget request proposes that the Foreign Agricultural Service (FAS) directly fund two activities currently supported by the Commodity Credit Corporation. These include the Emerging Markets Program and CCC Computer Facility operating costs. To fund these activities, the budget requests an increase in FAS’ appropriation of \$14 million and a reduction of \$5.7 million in funding for the Cooperator Program.

The budget proposes to shift the cost of the Emerging Markets Program and Computer Facility operations from the CCC to FAS so that these two activities would no longer be subject to the annual limitation on CCC reimbursable agreements. How would this limitation be more restrictive than the limitation on discretionary appropriations which might force the FAS to absorb the cost of these activities within its current funding level?

Answer. The 1996 Farm Bill limits reimbursements from CCC to the fiscal 1995 level of \$45.6 million. While both the Emerging Markets Program and support for the CCC Computer Facility were funded in 1995 out of the \$45.6 million base, a number of priority activities, including the costs of technical assistance associated with new CCC-funded conservation programs, were not. As such, competition for limited CCC funds is keen. Shifting funding for Emerging Markets Program and support for the CCC computer facility to discretionary funding provides a larger base from which to fund these activities and/or to identify tradeoffs. This is evidenced by the fact that the 1998 President’s budget requests an increase in FAS discretionary funds to help offset a major portion of these costs.

Question. To partially offset \$5.7 million of the cost of shifting support for these activities from the CCC to FAS, the fiscal year 1998 request proposes increased rent collections from those using FAS Agricultural Trade Offices and an increased cost-share factor for participants in the Foreign Market Development Cooperator Program.

Please explain what rent increases will be imposed on those using FAS Agricultural Trade Offices and how the Cooperator Program cost-share factor will be changed to reduce costs by \$5.7 million.

Answer. In fiscal year 1998, FAS will modify the current policy on rents to begin charging Cooperator’s rent for the space they occupy in Agricultural Trade Offices. This change will create a uniform policy for treatment of rent expenses among all cooperators, including those which are located in commercial space, and is necessary for purposes of implementing the new competitive allocation criteria for the FMD program.

With respect to the cost-share factor, the President’s budget proposes a funding level of \$22 million for FAS’s contribution to the FMD program in 1998. In order to maintain current Cooperator overseas offices, program activities and services, it

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will be necessary for Cooperators to assume responsibility for those costs which will no longer be funded through FAS appropriations.

Question. Fiscal year 1997 funding of \$27.5 million was made available for the Cooperator Program. What is the proposed fiscal year 1998 requested funding level for the Cooperator Program?

Answer. The President's fiscal year 1998 budget includes \$22.0 million for FAS's contribution to the Cooperator Program.

Question. What will be the impact of the proposed fiscal year 1998 funding reduction on participants in the Cooperator Program?

Answer. The 1998 President's budget proposals reflect a policy of shifting a greater share of the costs of the FMD program on the participants who benefit, i.e., the cooperators. The budget assumes increased contributions from cooperators of \$5.5 million in order to maintain overseas FMD activities at current levels.

Question. What is the projected Foreign Market Development Cooperator Program carryover balance from fiscal year 1997 to fiscal year 1998? What is it from fiscal year 1998 to fiscal year 1999?

Answer. Currently, we are forecasting net carryover balances at the end of fiscal year 1997 to total \$10.4 million. Assuming an appropriation of \$22.0 million for fiscal year 1998 and no change in marketing plan levels, currently at \$34.0 million, the net carryover balance would decline to an estimated \$1.3 million by the end of fiscal year 1998.

Question. Please provide for the record a breakdown of how the funds for the Foreign Market Development Cooperator Program were allocated in fiscal years 1996 and 1997.

Answer. I will provide that information for the record.
[The information follows:]

FAS CONTRIBUTIONS TO THE FOREIGN MARKET DEVELOPMENT COOPERATOR PROGRAM

[Dollars in thousands]

Name of cooperator	Fiscal year—	
	1996	1997
Cotton Council International	\$1,000	\$850
American Seed Trade Association	139	165
American Soybean Association	5,461	4,500
National Peanut Council	352	450
National Sunflower Association	100	160
National Cottonseed Products Association	116	116
Papaya Administrative Committee	45	.....
Western Growers Association	13	10
Millers National Federation	13	5
USA Rice Federation	718	1,250
U.S. Feed Grains Council	3,972	9,100
National Dry Bean Council	61	65
USA Dry Pea & Lentil	50	185
Protein Grain Products International	10	5
National Hay Association	42	35
U.S. Wheat Associates, Inc	5,883	4,250
National Renderers Association, Inc	985	750
Leather Industries of America	125	160
Mohair Council of America	4	20
U.S. Meat Export Federation	1,000	1,100
U.S. Beef Breeds Council	70	70
USA Poultry & Egg Export Council, Inc	1,100	1,000
American Sheep Industry Association, Inc	110	100
U.S. Hides, Skin & Leather Association	30	35
National Dairy Promotion & Research Board	250	250
U.S. Livestock Genetics Exports	400	368
American Forest and Paper Association	1,800	2,000
Southern U.S. Trade Association	75	75
Mid-America International Agr.-Trade Council	80	75
Eastern U.S. Ag. and Food Export Council	50	60

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FAS CONTRIBUTIONS TO THE FOREIGN MARKET DEVELOPMENT COOPERATOR PROGRAM—
Continued
[Dollars in thousands]

Name of cooperator	Fiscal year—	
	1996	1997
Western U.S. Agricultural Trade Association	75	105
National Association of State Dept. of Agriculture	150	186
Total	24,279	27,500

PUBLIC LAW 480—FISCAL YEAR 1998 REQUEST

Question. The fiscal year 1998 request proposes to maintain funding for Titles II and III of the Public Law 480 program but to reduce funding available for Title I credit sales. Direct credit authority is reduced from the fiscal year 1997 level of \$227 million to \$113 million (reduction of \$114 million); the subsidy appropriation is reduced from \$186 million to \$88 million (reduction of \$98 million); and ocean freight differential costs are reduced from \$14 million to \$10 million (reduction of \$4 million). The budget also proposes to transfer budget and expenditures for the Title I concessional sales program from the international affairs function to the agricultural function. The rationale given for this shift is to allow the Title I program to be managed and budgeted as part of a consistent package of agricultural export programs. Why does the fiscal year 1998 request propose to reduce funding for the Public Law 480 Title I program?

Answer. The reduction in the Public Law 480 Title I program level reflects the Administration's commitment to achieving a balanced budget and the need to reduce discretionary spending.

Question. Is the proposed reduction in funding for Title I of Public Law 480 in fiscal year 1998 in any way related to the transfer of the program from the international affairs function to the agricultural function of the budget?

Answer. No. The proposed reduction in funding for Title I of Public Law 480 in fiscal year 1998 is not related to the transfer of the program to the agricultural function of the budget. In fact, the transfer should help us support funding for the program in future years.

Question. Are you requesting that this Committee take any action with respect to the function reclassification of the Public Law 480 Title I program or are you simply notifying the Committee in the budget materials of this change?

Answer. We are not requesting that the Committee take any action. The President's budget has already transferred the Title I credit account to the agriculture function.

PROPOSED FISCAL YEAR 1997 PUBLIC LAW 480 TITLE I RESCISSION

Question. The Administration proposes a \$50 million total reduction in fiscal year 1997 appropriations for Public Law 480 Title I (a \$3.5 million rescission of title I ocean freight differential funds and a rescission of \$46.5 million in subsidy budget authority in the direct credit program). The budget indicates that commodity shipments would be reduced by approximately 200,000 metric tons as a result of this proposed rescission. However, it also indicates that allocations of Title I commodity assistance that have already been announced for fiscal year 1997 would not be affected by the proposed rescission because the reduction in program funding will be taken from a reserve of unallocated funds and from unobligated funds carried over from fiscal year 1996. Isn't it common that there would be a reserve of unallocated funds at this point for fiscal year 1997, i.e., that it has been the practice not to allocate all the funds but to reserve an amount for emergencies that may arise later in the fiscal year?

Answer. Yes. Our practice in the past has been to maintain a reserve in Title I in order to meet unanticipated food aid needs. However, upon enactment of the rescission, just over \$7 million will remain in the ocean freight differential account for fiscal year 1997 and these funds are likely to be used due to increasing costs of meeting cargo preference requirements.

Question. Please indicate for the record the number, amount, and timing of Title I funding allocations which have been made in each of the last five fiscal years.

Answer. I will be glad to provide that information for the record.

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[The information follows:]

PUBLIC LAW 480 TITLE I COMMITMENTS BY COUNTRY AND SIGNED AGREEMENT DATES—FISCAL YEAR 1992

Country	Signed date	Total commitment value
Jamaica	10/15/91	\$30,000,000
Morocco	11/04/91	45,000,000
Tunisia	11/05/91	15,000,000
El Salvador	12/09/91	30,000,000
Guyana	12/19/91	7,500,000
Egypt	1/09/92	40,410,000
Philippines	2/03/92	20,000,000
Congo	2/12/92	5,000,000
Sierra Leone	3/04/92	13,400,000
Jordan	3/05/92	20,000,000
Cote d'Ivoire	3/13/92	10,000,000
Sri Lanka	3/17/92	13,000,000
Guatemala	3/19/92	15,000,000
Suriname	4/10/92	8,000,000
Zimbabwe	6/02/92	40,000,000
Lithuania	6/05/92	10,000,000
Latvia	6/09/92	10,000,000
Estonia	6/10/92	10,000,000
Romania	7/17/92	10,000,000
Moldova	8/17/92	10,000,000
Tajikistan	8/21/92	10,000,000
Belarus	9/09/92	24,000,000
Total		396,310,000
Title I Funded Food for Progress:		
Albania	10/02/91	27,500,000
Panama	12/02/91	4,000,000
Nicaragua	2/18/92	25,000,000
Armenia	8/25/92	23,000,000
Georgia	9/01/92	14,000,000
Kyrgyzstan	9/11/92	10,000,000
Total		103,500,000
Grand total, 28 countries		499,810,000

PUBLIC LAW 480 TITLE I COMMITMENTS BY COUNTRY AND SIGNED AGREEMENT DATES—FISCAL YEAR 1993

Country	Signed date	Total commitment value
Costa Rica	11/06/92	\$15,000,000
Jamaica	11/10/92	30,000,000
Zimbabwe	12/11/92	5,000,000
Morocco	1/25/93	20,000,000
Lithuania	2/12/93	25,000,000
Cote d'Ivoire	3/03/93	10,000,000
Belarus	3/04/93	5,000,000
Sri Lanka	3/12/93	10,000,000
Jordan	3/19/93	30,000,000
El Salvador	3/23/93	33,400,000

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PUBLIC LAW 480 TITLE I COMMITMENTS BY COUNTRY AND SIGNED AGREEMENT DATES—FISCAL YEAR 1993—Continued

Country	Signed date	Total commitment value
Suriname	4/05/93	3,500,000
Turkmenistan	4/06/93	10,000,000
Moldova	4/19/93	10,000,000
Romania	4/21/93	10,000,000
Bulgaria	4/23/93	15,000,000
Tunisia	4/28/93	5,000,000
Philippines	4/30/93	20,000,000
Pakistan	6/03/93	40,000,000
Yemen	6/15/93	10,000,000
Ukraine	7/21/93	20,000,000
Guatemala	8/03/93	15,000,000
Tajikistan	8/05/93	14,000,000
Total		355,900,000
Title I funded Food for Progress:		
Armenia	2/11/93	20,600,000
Georgia	3/12/93	50,400,000
Kyrgyzstan	3/17/93	18,000,000
Albania	5/20/93	23,000,000
Total		112,000,000
Grand total, 26 countries		467,900,000

PUBLIC LAW 480 TITLE I COMMITMENTS BY COUNTRY AND SIGNED AGREEMENT DATES—FISCAL YEAR 1994

Country	Signed date	Total commitment value
Morocco	12/29/93	\$15,000,000
Belarus	1/04/94	27,500,000
Suriname	1/04/94	5,500,000
Jamaica	1/07/94	20,000,000
Sri Lanka	2/07/94	18,000,000
Turkmenistan	2/07/94	10,000,000
Jordan	2/25/94	15,000,000
Ukraine	3/04/94	20,000,000
Lithuania	3/14/94	15,000,000
Moldova	4/05/94	20,000,000
Guatemala	5/09/94	15,000,000
Croatia	5/09/94	10,000,000
Congo	5/18/94	6,000,000
Philippines	6/01/94	15,000,000
Cote d'Ivoire	6/20/94	15,000,000
Angola	7/11/94	8,000,000
Macedonia	8/09/94	7,000,000
Total		242,000,000
Title I Funded Food for Progress:		
Albania	6/03/94	15,000,000
Armenia	2/15/94	25,000,000

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PUBLIC LAW 480 TITLE I COMMITMENTS BY COUNTRY AND SIGNED AGREEMENT DATES—FISCAL YEAR 1994—Continued

Country	Signed date	Total commitment value
Georgia	3/07/94	24,000,000
Kyrgyzstan	2/15/94	16,000,000
Tajikistan	8/31/94	10,000,000
Total		90,000,000
Grand total, 22 countries		332,000,000

PUBLIC LAW 480 TITLE I COMMITMENTS BY COUNTRY AND SIGNED AGREEMENT DATES—FISCAL YEAR 1995

Country	Signed date	Total commitment value
Ukraine	11/21/94	\$25,000,000
Jamaica	12/05/94	14,000,000
Sri Lanka	1/13/95	19,500,000
Belarus	1/27/95	20,000,000
Suriname	2/21/95	6,000,000
Jordan	3/02/95	15,000,000
Pakistan	4/07/95	10,000,000
Moldova	4/13/95	10,000,000
Lithuania	6/13/95	10,000,000
Congo	6/22/95	6,000,000
Croatia	7/12/95	5,000,000
Cote d'Ivoire	7/12/95	10,000,000
El Salvador	8/01/95	10,000,000
Guyana	8/22/95	3,000,000
Turkmenistan	8/29/95	15,000,000
Bolivia	8/31/95	5,000,000
Angola	9/05/95	7,000,000
Angola	9/21/95	3,980,000
Total		194,480,000
Title I funded Food for Progress:		
Albania	8/21/95	5,000,000
Armenia	12/29/94	31,900,000
Georgia	2/21/95	24,700,000
Kyrgyzstan	5/19/95	19,500,000
Tajikistan	5/11/95	7,000,000
Total		88,100,000
Grand total, 22 countries		282,580,000

PUBLIC LAW 480 TITLE I COMMITMENTS BY COUNTRY AND SIGNED AGREEMENT DATES—FISCAL YEAR 1996

Country	Signed date	Total commitment value
Guyana	12/12/95	\$9,000,000
Belarus	12/20/95	9,966,802

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PUBLIC LAW 480 TITLE I COMMITMENTS BY COUNTRY AND SIGNED AGREEMENT DATES—FISCAL YEAR 1996—Continued

Country	Signed date	Total commitment value
Turkmenistan	12/21/95	10,000,000
Armenia	12/27/95	15,000,000
El Salvador	12/27/95	15,000,000
Jamaica	12/27/95	15,000,000
Bolivia	12/28/95	10,000,000
Sri Lanka	12/28/95	10,000,000
Jordan	12/28/95	21,000,000
Lithuania	12/28/95	10,000,000
Congo	12/29/95	5,000,000
Cote d'Ivoire	12/29/95	10,000,000
Suriname	12/29/95	5,000,000
Philippines	12/29/95	15,000,000
Ukraine	12/29/95	20,000,000
Moldova	5/31/96	8,500,000
Pakistan	8/05/96	10,000,000
Moldova	9/06/96	6,500,000
Congo	9/18/96	3,000,000
Angola	9/20/96	5,000,000
Angola	9/23/96	5,000,000
Total		217,966,802
Title I Funded Food for Progress:		
Georgia	12/20/95	28,800,000
Albania	12/28/95	5,000,000
Kyrgyzstan	12/29/95	15,000,000
Tajikistan	12/29/95	11,000,000
Total		59,800,000
Grand total, 24 countries		277,766,802

Question. Why weren't Public Law 480 Title I funds carried over from fiscal year 1996 included in the initial funding allocation for fiscal year 1997?

Answer. The funds carried over from fiscal year 1996 were not included in our initial funding allocations for fiscal year 1997 because, while the funds apportioned by OMB included an estimate of carryover funds, the actual carryover balances were not known until late November or December. We did not want to announce Title I programming funded from carryover balances until we knew the actual balances carried over from fiscal year 1996.

Question. Please provide for the record the amount of Title I funds carried over in each of the past five fiscal years and indicate when those carryover balances were allocated.

Answer. Funds carried into subsequent years from fiscal years 1992 through 1994 were \$4.4 million, \$4.7 million, and \$16.9 million, respectively. In fiscal year 1995, \$28.0 million was used to reimburse CCC for wheat released from the Food Security Wheat Reserve and \$24.7 million was carried forward into fiscal year 1996. The amount of appropriation carried from fiscal year 1996 into fiscal year 1997 totaled \$32.9 million. The \$32.9 million will be used in fiscal year 1997 to fund a portion of the proposed \$50 million Public Law 480 Title I rescission.

EXPANSION OF OVERSEAS OFFICES

Question. Funding of \$1.5 million was made available for fiscal year 1997 to enable the FAS to expand overseas offices. Priority was to be given to posts serving expanding markets in Asia and Latin America. Where have offices been established with the additional funds provided?

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Answer. In fiscal year 1997, FAS has opened Agricultural Trade Offices in Jakarta and Miami (for the Caribbean Basin), and the opening of the Moscow ATO is scheduled for late summer 1997. In addition, an FAS office has been established in Hanoi, and FAS will open an office in Nuevo Laredo, Mexico in the summer of 1997. The agency is adding an American officer position in Geneva at the WTO and adding one officer slot at the ATO's in both Seoul and Tokyo, all of which will take place this summer.

In conjunction with this increased American officer presence, FAS will have increased foreign national contract employee staffing at the following 15 offices in the course of fiscal year 1997.

Brussels, Belgium-U.S. Mission to the E.U.	Manila, Philippines
Caribbean Basin ATO (Miami)	Nuevo Laredo, Mexico
Guangzhou, China ATO	Sao Paulo, Brazil
Hanoi, Vietnam	Seoul, Korea
Jakarta, Indonesia ATO	Shanghai, China ATO
Kuala Lumpur, Malaysia	St. Petersburg, Russia
Lagos, Nigeria	Taipei, Taiwan
	Tokyo, Japan ATO

FAS is presently conducting its annual review of overseas resources. FAS will continue to adjust staffing to take advantage of medium- and long-term opportunities for U.S. agriculture.

Question. Please provide for the record a list of FAS' counselor/attache, and trade offices overseas and the amount of funding and full-time equivalent staffing levels provided for each in each of fiscal years 1990 through 1996, and estimated for fiscal years 1997 and 1998.

Answer. I will provide a list of FAS' counselor/attache, and trade offices for the record.

[The information follows:]

Counselor/attache U.S. head	ATO's
Argentina, Buenos Aires	
Australia, Canberra	
Austria, Vienna	
Belgium, Brussels (USEU)	
Brazil, Brasilia	
Brazil, Sao Paulo	
Bulgaria, Sofia	
Canada, Ottawa	Caribbean Basin (Miami)
Chile, Santiago	
China, Beijing	China, Guangzhou China, Shanghai
Colombia, Bogota	
Costa Rica, San Jose	
Cote d'Ivoire, Abidjan	
Denmark, Copenhagen	
Dominican Republic, Santo Domingo	
Egypt, Cairo	
France, Paris	
Germany, Bonn	Germany, Hamburg
Greece, Athens	
Guatemala, Guatemala City	
India, New Delhi	Hong Kong
Indonesia, Jakarta	
	Indonesia, Jakarta Italy, Milan
Italy, Rome	
Italy, Rome (FODAG)	
Japan, Tokyo	Japan, Osaka
Kenya, Nairobi	Japan, Tokyo

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Counselor/attache U.S. head	ATO's
Korea, Seoul	Korea, Seoul
Malaysia, Kuala Lumpur	
Mexico, Mexico City	Mexico, Mexico City
Morocco, Rabat	
Netherlands, The Hague	
New Zealand, Wellington	
Nigeria, Lagos	
Pakistan, Islamabad	
Peru, Lima	
Philippines, Manila	
Poland, Warsaw	
Russia, Moscow	
	Saudi Arabia, Riyadh
	Singapore
South Africa, Pretoria	
Spain, Madrid	
Sweden, Stockholm	
Switzerland, Geneva (WTO)	
Taiwan, Taipei	Taiwan, Taipei
Thailand, Bangkok	
Tunisia, Tunis	
Turkey, Ankara	
	U.A.E. Dubai
United Kingdom, London	
Venezuela, Caracas	
Vietnam, Hanoi	

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FOREIGN AGRICULTURAL SERVICE GENERAL AUTHORIZATIONS AND AMERICAN SALARIES—FISCAL YEARS 1990–98

[In thousands of dollars]

Post	Fiscal year—								
	1990	1991	1992	1993	1994	1995	1996	1997	1998
FOREIGN AGRICULTURAL AFFAIRS									
Austria	277	291	371	533	552	606	663	675	675
Czech Rep				21	31	41	36	45	45
France	860	828	968	1,041	973	1,033	1,002	919	1,014
Greece	202	231	251	271	286	307	364	296	296
Israel	66	82	92	112	109	121	110	129	129
Italy, Emb	718	846	1,015	932	778	827	840	706	706
Italy, Fodag	153	162	194	200	180	187	203	206	206
Portugal	290	222	274	287	153	192	433	177	177
Spain	669	783	848	818	764	767	804	862	957
Switz, Bern	235	233	251	195	87	106	86	59	59
Switz, Gen	378	468	506	555	551	594	614	725	725
Belgium, E	344	238	276	271	255	274	332	217	217
Belg. USEU	765	806	919	1,019	946	968	1,001	1,169	1,169
Denmark	291	330	354	401	421	429	337	273	273
United Kingdom	618	586	686	574	505	986	734	683	683
Germany	644	646	783	738	671	728	764	794	794
Berlin	149	158	197	129					
Ireland	124	139	147	123	125	137	147	158	158
Netherlands	470	535	632	627	640	703	727	704	704
Sweden	202	235	324	309	272	295	318	360	360
Total	7,455	7,819	9,088	9,156	8,299	9,301	9,515	9,157	9,347
Argentina	395	488	548	558	597	652	688	715	715
Brazil	659	705	748	808	710	852	1,161	744	744
Canada	336	362	408	358	729	409	414	451	451
Chile	152	182	206	226	236	266	319	355	355
Colombia	248	234	255	262	349	357	350	416	416
Costa Rica	141	169	220	278	274	310	309	346	346
Dom. Rep	253	268	318	339	354	364	393	307	307
Ecuador	115	61	70	98	274	291	177	136	136
Guatemala	314	373	411	439	438	501	538	566	566
Mexico	445	549	733	712	700	616	647	708	708
Panama		111	191						
Peru	304	308	469	308	149	177	246	317	317
Venezuela	128	164	192	196	185	457	418	439	439
Total	3,490	3,974	4,769	4,582	4,995	5,252	5,660	5,500	5,500

FOREIGN AGRICULTURAL SERVICE GENERAL AUTHORIZATION HISTORY—FISCAL YEARS 1990–97

[In thousands of dollars]

Post	Fiscal year—								
	1990	1991	1992	1993	1994	1995	1996	1997	1998
FOREIGN AGRICULTURAL AFFAIRS									
Algeria					231	44	16	30	30
Bulgaria			258	326	294	312	381	267	172
Bangladesh	60	38	48	34	33	33	34	60	60
Cote D'Ivoire	317	381	419	471	261	237	255	311	311
Egypt	358	323	423	340	334	328	380	380	380
India	357	352	319	337	346	312	420	403	403
Kenya	171	198	265	240	47	262	188	228	228
Morocco	137	162	193	188	219	224	215	223	223
Nigeria	130	126	246	247	313	345	347	348	348
Pakistan	174	182	274	214	182	196	217	239	239
Romania	20	15	29	31	30	31	26	30	30

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FOREIGN AGRICULTURAL SERVICE GENERAL AUTHORIZATION HISTORY—FISCAL YEARS 1990–97—
Continued
[In thousands of dollars]

Post	Fiscal year—								
	1990	1991	1992	1993	1994	1995	1996	1997	1998
Syria	32	39	43	52	32	42	42	56	56
Serbia-Mont						22	36	40	40
S. Africa	159	186	228	256	262	421	412	566	566
Tunisia					190	219	205	232	232
Turkey	195	236	217	278	368	454	413	496	496
Total	2,110	2,238	2,962	3,014	3,142	3,482	3,587	3,909	3,814
Australia	250	239	294	267	287	295	307	325	325
PRC	318	269	423	556	789	787	1,023	922	922
Indonesia	301	322	385	650	543	509	476	434	434
Japan	1,001	1,138	1,372	1,428	1,546	1,582	1,584	1,611	1,611
Korea	360	310	358	374	430	531	587	602	602
Malaysia	146	168	186	206	203	223	231	228	228
New Zealand	130	136	151	151	180	168	172	201	201
Philippines	235	247	318	386	351	412	460	511	511
Poland	204	299	440	359	377	380	411	482	482
Russia	320	459	692	961	907	757	770	957	957
Thailand	266	314	518	511	596	568	638	637	637
Ukraine						155	142	154	249
Vietnam							198	268	268
Yugoslavia	123	147	119	33	20				
Total	3,654	4,048	5,256	5,882	6,229	6,367	6,999	7,332	7,427
Total, FAA	16,709	18,079	22,075	22,634	22,665	24,402	25,761	25,898	26,088
AGRICULTURAL TRADE OFFICES									
Algiers, Algeria	479	448	476	554					
Manama, Bahrain	295	323	366	362					
Caribbean basin								132	132
Beijing, China	281	206	230	272	190				
Shanghai, China						301	580	553	553
Guangzhou, China	181	212	209	536	316	307	348	406	406
Hamburg, Germany	471	498	533	537	855	556	483	433	433
Hong Kong	547	590	645	666	814	777	967	845	845
Jakarta, Indonesia							105	97	97
Baghdad, Iraq	221								
Milan, Italy								255	255
Tokyo, Japan	1,266	1,540	1,646	1,740	1,439	2,207	1,994	1,930	1,971
Osaka, Japan		141	1,937	1,144	1,268	1,943	417	451	451
Seoul, Korea	245	528	710	655	672	773	891	918	959
Mexico			856	743	777	755	883	1,010	1,010
Lagos, Nigeria	103	115							
Moscow, Russia									
Riyadh, Saudi Arabia	266	261	285	263	288	287	312	326	326
Singapore	703	725	782	821	891	928	999	962	921
Tunis	178	175	212	222					
Istanbul, Turkey	56	67							
London, U.K	821	1,219	1,313	1,298					
Caracas, Venezuela	229	321	319	351	265				
Dubai, U.A.E					427	327	320	306	306
Total, ATO	6,342	7,369	10,519	10,164	8,202	9,161	8,299	8,624	8,665
Grand total	23,051	25,448	32,594	32,798	30,867	33,563	34,060	34,522	34,753

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FOREIGN AFFAIRS ADMINISTRATIVE SUPPORT ¹—FISCAL YEARS 1990–98
 [In thousands of dollars]

Post	Fiscal year—								
	1990	1991	1992	1993	1994	1995	1996	1997	1998
Foreign Agricultural Affairs	5,120	3,320	4,143	4,500	4,392	4,858	4,853	5,133	5,133
Agricultural Trade Offices	1,850	1,660	1,413	1,770	1,525	1,434	1,320	1,362	1,362

¹ Reimbursement to State Department.

PROPOSED APPROPRIATIONS BILL LANGUAGE

Question. The fiscal year 1998 budget proposes new appropriations bill language to provide up to a \$3 million advance appropriation to fund overseas wage and price increases, subject to documentation by USDA of actual overseas inflation and deflation. How has the FAS managed the impact of overseas inflation and exchange rate variations in past years?

Answer. In previous budgets, requests for adjustments for anticipated overseas wage and price increases and exchange rate fluctuations were included as part of the President's budget. However, it is virtually impossible to accurately forecast these costs given the long lead time associated with the budget process. In some years, amounts were included for increases that did not subsequently occur at the levels estimated and conversely, budgets were presented that did not include sufficient funding to maintain current services overseas.

Question. Why is the agency now seeking authority to use up to \$3 million in 1999 to compensate for any net 1998 overseas inflation?

Answer. The proposed advance appropriation will eliminate the significant budgetary uncertainties associated with attempting to accurately forecast wage and price increases as well as currency fluctuations 18 to 24 months in advance. Upon demonstration as to the extent that the U.S. exchange rate fell relative to other currencies overall in fiscal year 1998, OMB will make available some or all of the fiscal year 1999 advance appropriation. In addition, having the fiscal year 1998 appropriation available for obligation for two fiscal years will allow for the subsequent use of an unobligated balances that remain where the U.S. exchange rate rises relative to other currencies.

Question. What FAS activities would be impacted by reserving this \$3 million to possibly be spent in fiscal year 1999?

Answer. The proposed fiscal year 1999 advance appropriation would cover increases in overseas operations costs due to unavoidable wage and price increases and/or currency fluctuations in fiscal year 1998. By having these funds appropriated in advance, no FAS activities would be impacted should our overseas offices experience higher operating costs due to these macro-economic factors. In fact this proposal would eliminate the potential that FAS currently faces of having to reduce FAS export expansion efforts in the current fiscal year to offset unanticipated and unavoidable overseas cost increases.

Question. How would the agency notify this Committee that it had documented actual overseas inflation and deflation?

Answer. Using publicly available exchange rates and other factors, FAS will construct a weighted index that indicates the loss of buying power the agency faces overseas. Needed funds out of the \$3 million advance appropriation will be used to compensate for the change. The Committee would be informed ahead of time before any action is taken, as well as given an opportunity to comment on the exchange rate index.

MARKET ACCESS BARRIER IDENTIFICATION

Question. The fiscal year 1998 request includes an increase of \$500,000 for a Market Barrier Identification initiative. Under this initiative, FAS would implement a systematic process to review, identify, and catalog technical barriers to trade and other technical requirements that limit export opportunities for U.S. agricultural products in the top 30 U.S. export markets.

For fiscal year 1998, FAS is seeking \$500,000 for a Market Barrier Identification initiative. The explanatory notes indicate that this initiative will lead to recommendations for overcoming the identified barriers to expand U.S. agricultural exports. Why is the development of a catalog necessary to do this? How do you identify and overcome these barriers now?

Answer. The term catalog in this situation implies a much broader meaning—not simply short descriptions of identified trade problems in a country. The initiative's

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goal is to more systematically and comprehensively identify technical barriers all the way from very minor barriers up through the obvious major issues. Many barriers are minor irritants which are sporadic and in fact overcome by commerce without major fuss. Other barriers are critical blockages which effectively stop trade. The initiative envisions a broad-base engagement to better facilitate private trade's and government's ability to identify and navigate around these hurdles and eliminate the unjustified ones. The end result will provide U.S. exporters with more systematic, comprehensive, timely and definitive solutions for their export interests on the one side, and will help facilitate resolution of outstanding barriers on the other.

Question. Doesn't this annual report identify barriers to the expansion of U.S. agricultural exports? Why does the USDA need to do a separate catalog?

Answer. This initiative does not represent a duplicate listing of barriers on an annual basis. It serves both daily market servicing and outreach as well as strategic issue resolution.

Question. Who are the intended users of this proposed catalog?

Answer. U.S. agricultural product exporting firms are targeted as the primary beneficiaries of this initiative.

Question. Please provide a detailed justification of the \$500,000 requested for this initiative.

Answer. A major gain in the Uruguay Round was agreement to include disciplines on technical barriers to trade. Elaboration of the specific disciplines in both the Agreement on Technical Barriers to Trade and the Agreement on the Application of Sanitary and Phytosanitary Measures is continuing, especially with regard to harmonization, equivalency and consistency. Clearly a starting point for a meaningful discussion of all these is knowing how transparent or non-transparent a market is. This initiative takes a more comprehensive, detailed approach to transparency issues with respect to U.S. agricultural export interests in the top 30 U.S. markets. Transparency is to know in advance what will be expected if I want to export x product to y country. This information is not always readily available. This initiative is in line with the objectives of improved government services, more systematic servicing and outreach to current and potential U.S. agricultural exporters.

COCHRAN FELLOWSHIP PROGRAM

Question. Please provide a breakdown by country and funding source of the fiscal year 1996 and estimated fiscal year 1997 Cochran Fellowship participant levels.

Answer. In fiscal year 1996, a total of 676 participants from 44 countries received training under the Cochran Fellowship Program. Of the total, 287 participants (39 percent of the total) were funded by appropriations, 207 participants (31 percent of total) were funded by USDA's Emerging Markets Office (EMO), and 182 participants (27 percent of the total) were funded by the U.S. Agency for International Development (USAID) under the Freedom Support Act. Appropriations were used in 29 countries of Asia, Latin America, Africa, and Eastern Europe. EMO funds were used in Eastern Europe (excluding Turkey), South Africa and Namibia, and Russia, Ukraine and Kazakhstan. Freedom Support Act funding was used in the 12 New Independent States.

The following provides the fiscal year 1996 participant levels by region and by country:

- Asia: 102 participants from seven countries: Korea (16 participants), Malaysia (8), China (24), Thailand (17), Indonesia (10), Philippines (25), and Vietnam (2)
- Eastern Europe: 171 participants from 13 countries: Turkey (12), Poland (34), Hungary (13), Czech Republic (10), Slovakia (15), Albania (7), Bulgaria (22), Slovenia (16), Croatia (8), Latvia (10), Estonia (10), Lithuania (6), and Romania (8).
- Latin America: 85 participants from seven North, Central, and South American countries: Mexico (32), Venezuela (9), Trinidad & Tobago (8), Barbados & Other West Indies (2), Panama (9), Colombia (19), and Chile (6).
- Africa: 47 participants from five African countries: Cote d' Ivoire (2), Algeria (6), Tunisia (14), South Africa (22), and Namibia (3).
- New Independent States: 271 participants from the New Independent States of the Former Soviet Union: Russia (121), Ukraine (43), Belarus (13), Kazakhstan (23), Kyrgyzstan (7), Uzbekistan (8), Turkmenistan (6), Tajikistan (9), Armenia (18), Moldova (12), Georgia (5), and Azerbaijan (6).

In fiscal year 1997, the Cochran Fellowship Program will work in the above mentioned countries except Belarus and possibly Albania. In addition, pilot programs will be started in Brazil, Kenya, and Bosnia. The program in Vietnam will be expanded using EMO funding. We expect to provide training to more than 700 participants in fiscal year 1997.

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Question. Also, please provide examples of achievements, by country, the Program has documented in 1996.

Answer. The Cochran Fellowship Program provides an effective method of providing U.S.-based training for international agriculturists and business persons. The program is a tool for expanding U.S. contacts within the country, addressing important policy and trade-related issues, and in promoting contact with the U.S. agribusiness sector. The following provide examples of the success of the 1996 program.

Vietnam.—The Cochran Fellowship Program was initiated in Vietnam in 1996. The Agricultural Attache in Hanoi states: "FAS/Hanoi is extremely pleased with the development of the Cochran Fellowship Program in Vietnam. The program has served to expand our contacts and increase our knowledge and understanding of the agricultural sector. The implementation phase of the program will help develop the linkages necessary to expand the market for U.S. agricultural products here in Vietnam."

Korea.—The FAS Agricultural Office in Seoul reports that Cochran Programs in food safety have helped improve mutual understanding of food safety and technical issues: "The end result has been fewer misunderstandings, relatively fewer problems, and improved access for U.S. agricultural products. This has been especially true for high-valued U.S. agricultural products, an area that is the fastest growing and approaching \$1 billion annually."

Korea.—The Oregon Department of Agriculture reports that Korea has approved the Oregon Export Service Center as the foreign testing center for pre-clearance of U.S. products going to Korea. "We are the first organization that Korea has ever considered to certify as a foreign testing organization. This is a milestone for us and the Cochran Program helped us a great deal in achieving this goal." Twenty-two (22) Cochran-sponsored officials from the Korean Ministry of Health & Social Welfare and Food & Drug Administration have visited the Oregon Export Service Center over the past three years.

China.—The FAS Agricultural Trade Office in Guangzhou, China reports that a 1995 Seafood Team "produced excellent contacts with an enormous industry with which the U.S. had limited previous contacts. At a quantified minimum, hundreds of thousands—possibly millions—of dollars worth of trade has resulted directly from that one team."

Malaysia.—A Senior Advisor from the Prime Minister's Office in Malaysia reports that as a result of his Cochran Halal Bilateral Education Program he is forming a Halal Coordination Council for Malaysia (HCCM) in Chicago. Once established HCCM would be able to approve U.S. Halal slaughter facilities without Malaysian authorities having to physically inspect the facilities. They are working to have HCCM be recognized by other Muslim countries such as Saudi Arabia. This could greatly facilitate poultry and other livestock exports to Muslim countries.

Thailand.—The Thai Tanners Association identified their participation in Cochran Programs several years ago as the major reason Thai importers of hides and skins switched to U.S. suppliers. Exports of U.S. hides and skins to Thailand have shown tremendous gains over the past five years.

Mexico.—Over the past six months, the Cochran Program in conjunction with FAS Export Credits, CoBank in Denver, and the National Cattle Breeders Association has provided training to Mexican bankers on the GSM-103 livestock program for Mexico. Since the initial training, five sales of U.S. livestock have been registered with USDA for about \$2.2 million and at least two other sales of \$3 and \$4 million respectively are being negotiated.

Colombia.—Two Colombian alumni who trained in the U.S. in 1992 and 1993 report purchases of more than 1,500 breeding sows. Colombian food retailers reported purchases of popcorn (\$500,000), cookies (\$250,000), and dried beans after their Cochran program.

Venezuela.—FAS Caracas reports that a Venezuelan cattleman learned how to perform embryo transplants and has already purchased U.S. Brahman embryos and equipment used in embryo transplants. In another example, two Venezuelan Ministry of Agriculture officials learned how commodity boards of trade operate. This training will assist in establishing a commodity board of trade in Venezuela, which will strengthen market-oriented policies and promote trade.

Panama.—A 1995 Cochran participant developed a new store layout, better displays and advertising, and a more consumer-oriented attitude after his supermarket training. This has led to a faster turnover of products, which includes new purchases of deli meat, hams, fresh produce, and cheeses from the United States.

Poland.—Poland required imported oak logs to be debarked prior to shipping because they were concerned about pests in the bark. Debarked logs, however, often became damaged during shipment and thus became unsuitable for use in veneer. The Polish General Director for Plant Quarantine observed U.S. fumigation methods

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and was convinced that with-bark-on logs from the U.S. were not a threat if the logs were properly fumigated. The regulations to allow with-bark-on logs became effective in February 1996.

Regional East Europe.—The FAS Agricultural Attache in Vienna states that “the Cochran Program is one of the most beneficial tools available in promoting goodwill, building contacts, and promoting trade opportunities in the region.”

Slovenia.—The FAS Agricultural Attache in Vienna reports that a joint 1996 Cochran/American Soybean Association training activity on the use of soybean meal in livestock feed has resulted in sales of 25,000 metric tons of U.S. corn and 5,000 metric tons of U.S. soybean meal valued at about \$7 million.

Turkey.—A Turkish participant reported that his company is concluding a long-term contract with a Californian supplier of sauces, mustard, mayonnaise, and sweet corn after attending the FMI/NASDA Food Showcase. He stated: “I believe this program to be of utmost importance in promoting U.S. products for the simple reason that we had no intention of importing U.S. products until we came under the program.”

Albania.—The FAS Agricultural Office covering Albania reports that Cochran seed certification training has helped convince Albanian import authorities of the quality of U.S. certified seed: “Despite very tight Albanian import requirements, the (first shipment of U.S. certified) seeds had no problem with entry or registration.”

Uzbekistan.—A 1995 Cochran fellow from Uzbekistan started a small food store in a joint venture with a U.S. company. He imported \$130,000 worth of U.S. consumer products in 1996. The participant will pay his own way to the 1997 Food Marketing Institute (FMI) Food Expo in Chicago in order to become familiar with additional U.S. consumer ready foods.

Russia.—A businessman from the Russian Far East attended the Produce Marketing Association meeting in San Diego and purchased, on a trial basis, more than \$220,000 worth of U.S. apples, pears, and other fruits. If successful in the trial market, the participant promises to import that much per month. Another businessman from the Russian Far East is importing 1,200 metric tons per month of flour from a Seattle flour company he visited during his 1995 Cochran program.

Cote d’Ivoire.—The Agricultural Attache in Cote d’Ivoire reports that Cochran alumni have already imported or plan to import \$20 million of brown rice under Public Law 480 Title I and about \$30 million on commercial terms. A banker, who was part of a Cochran GSM-103 Agricultural Export Credit Team, reports that his bank facilitated the financing for the above purchases, and is working on financing 6,000 metric tons of U.S. soy oil.

EXPORT SUBSIDY PROGRAMS

Question. Please provide the total amount of bonus awards to U.S. exporters under the Export Enhancement Program, the Dairy Export Incentive Program, and the Sunflower and Cottonseed Oil Assistance Programs in each of fiscal years 1995 and 1996 and estimated for fiscal year 1997.

Answer. I will be glad to provide that information for the record.
[The information follows:]

EXPORT ENHANCEMENT PROGRAM—AWARDS FOR FISCAL YEARS

Commodity	Quantity (MT)	Mean bonus
Fiscal year 1995:		
Barley malt	112,700	\$3,740,640.00
Barley or malting barley	75,000	1,963,750.00
Eggs	1 63,781,720	13,178,873.47
Feed grains	396,208	11,483,323.04
Frozen pork	21,030	12,704,714.00
Frozen poultry	40,243	20,823,145.00
Rice	112,747	5,047,393.00
Wheat	13,906,704	243,133,273.97
Wheat Flour	309,799	27,409,110.48
Total		339,484,222.96
Fiscal year 1996: Frozen poultry		
	11,125	5,152,850.00
Total		5,152,850.00

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EXPORT ENHANCEMENT PROGRAM—AWARDS FOR FISCAL YEARS—Continued

Commodity	Quantity (MT)	Mean bonus
Fiscal year 1997: There are no awards for fiscal year 1997 to date.		

¹ Dozen.

DAIRY EXPORT INCENTIVE PROGRAM—AWARDS FOR FISCAL YEARS

Commodity	Quantity (MT)	Mean bonus
Fiscal year 1995:		
Andydrous milkfat	15,243	\$7,941,756.20
Butter	12,904	6,009,871.50
Butteroil	2,239	1,185,533.00
Butteroil and/or anhydrous milkfat	8,164	6,450,435.50
Cheddar cheese	1,359	1,834,105.00
Mozzarella cheese	1,839	1,964,077.00
Nonfat dry milk	186,898	97,655,598.60
Processed American cheese	227	182,482.28
Whole milk powder	19,384	17,000,948.75
Total		140,224,807.83
Fiscal year 1996:		
Cheddar cheese	158	162,740.00
Cream cheese	290	109,360.00
Mozzarella cheese	1,139	1,006,620.00
Nonfat dry milk	42,674	16,817,678.93
Processed American cheese	904	776,929.64
Whole milk powder	2,580	1,550,938.78
Total		20,424,267.35
Fiscal year 1997 (through April 14, 1997):		
Anhydrous milkfat	863	741,190.00
Butter	120	64,456.50
Cheddar cheese	76	50,426.00
Mozzarella cheese	722	500,588.00
Nonfat dry milk	38,604	30,116,043.15
Processed American cheese	498	287,456.40
Whole milk powder	1,496	1,509,381.50
Total		33,269,541.55

QUANTITY AWARDED UNDER THE COTTONSEED OIL AND SUNFLOWERSEED OIL ASSISTANCE PROGRAMS

[Date of agreement for fiscal year]

Country	Quantity/awarded (MT)	Estimated ¹ bonus awarded	Actual ² bonus paid
Cottonseed Assistance Program			
Fiscal year 1995: Egypt (515A-1)	1,200	\$16,800.00	\$16,796.78
Total	1,200	16,800.00	16,796.78
Total bonus value:			
Sunflowerseed oil		16,800.00	16,796.78
Cottonseed oil			
Total		16,800.00	16,796.78

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QUANTITY AWARDED UNDER THE COTTONSEED OIL AND SUNFLOWERSEED OIL ASSISTANCE
PROGRAMS—Continued
[Date of agreement for fiscal year]

Country	Quantity/awarded (MT)	Estimated ¹ bonus awarded	Actual ² bonus paid
Fiscal year 1996: There were no awards for fiscal year 1996.			
Fiscal year 1997: There are no awards for fiscal year 1997.			

¹ During fiscal years 1989–1991, the bonus was paid in physical stocks of oil. For these years, the Estimated Bonus Awarded represents the estimate of the cost of the bonus oil on the date of the Agreement. For later years, this column shows the bonus on the quantity awarded exclusive of shipment tolerances.

² The Actual Bonus Paid reflects the cost of the bonus oil purchased in fiscal years 1989–1991. In later years it reflects bonus payments on the quantity exported, inclusive of tolerances.

QUESTIONS SUBMITTED BY SENATOR BURNS

FOREIGN AGRICULTURAL SERVICE

Question. It is my understanding that your agency does not approve of the line item budget for the Foreign Market Development account. It has been stated that you are not able to place more funds into the account than what is the line item of appropriations, basically that you can not put more money in than what is legal. Yet your agency has never put any more money in the account in the past, why should this Senator and the cooperators believe you would deposit more money in the account now?

Answer. It has been FAS policy to provide the maximum level of support possible to the Foreign Market Development Cooperator Program. In six of the past ten fiscal years, FAS has provided additional funding for the program beyond the baseline level for that particular year and we have every intention of continuing this policy.

Question. FAS intends to assist American agriculture to increase the value of farm, food, fish, and forestry exports by 50 percent over 1994 levels by the year 2000. To meet this goal, FAS will conduct a “demand-driven export strategy, deploying five major policy objectives to execute the strategy while integrating commodity and country market priorities for allocating scarce export assistance resources.” How does strategic outreach and market intelligence fulfill the strategy of doing more with less? In other words, why invest in efforts to increase domestic awareness of export opportunities/global consumer quality and safety expectations, as well as educating foreign buyers about the merits of U.S. products and how they may be purchased, when the private-sector is already doing these things without additional federal expenditure?

Answer. Dunn and Bradstreet reports there are approximately 150,000 companies in the United States producing, manufacturing, packing or marketing agricultural products, yet fewer than 10,000 are actually engaged in exporting. With sales to the export market growing at three times the rate of the domestic market it is very important that U.S. companies be alerted to overseas opportunities and the potential for profit. Increased exports create jobs in both urban and rural communities, provide a safety net for farm income, and contribute positively to the balance of trade. It is clearly in the best interest of the national economy that the Government engage in increasing domestic awareness of global market opportunities, consumer quality and safety expectations, and educate foreign buyers about the merits of U.S. products. The USDA using its extensive communication network and relationships with universities, export assistance centers and, in particular, the State Departments of Agriculture is effectively conveying the message to small, medium and new-to-export companies and cooperatives alike that real export opportunities exist, and that USDA can be a full partner to the private sector in expanding sales, developing new markets and promoting new products. Frequently, companies are reluctant to attempt the export market because of the greater risks and higher demands for new market information and country specific knowledge. These barriers reduce possible exports without Federal encouragement and support. The private sector is neither organized nor equipped to conduct the type of information campaign needed to be effective in reaching such a diverse and wide-spread target audience.

Question. Consistent with the implementation of the Government Performance and Results Act (GPRA), FAS has articulated a “General Goal No. 2: Increase Foreign Demand for U.S. Agricultural, Fish, and Forest Product Exports through Market Development and Promotion Activities.” Aside from the obvious question of why this is not the agency’s number 1 goal, why does FAS propose to cut FAS foreign

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market development activities, particularly from Foreign Market Development Co-operator Program to fund the CCC Computer Facility?

Answer. The 1996 FAIR Act includes provisions that limit CCC funding made available each year to other agencies through reimbursable agreements. Because of this limitation and the nature of the activities involved, the budget proposes to shift the annual operating costs of the CCC Computer Facility and related IRM activities as well as the Emerging Markets Program, with a combined fiscal year 1998 budget of \$19.7 million, from mandatory funding to discretionary funding in the FAS annual appropriation. FAS, currently uses about half of the total section 11 cap, which is needed to fund other CCC activities, activities more relevant to the CCC mission in NRCS and FSA. However, the President's commitment to achieving a balanced budget by 2002 has also placed constraints on discretionary spending and, as a result, the FAS budget includes an increase of \$14.0 million for these activities, with \$5.7 million balance to be absorbed through reductions in FAS market development activities. This was not a decision that was made lightly. However, this reduction can be ameliorated by increased cost-sharing by participants in the Foreign Market Development Program.

Question. FAS proposes an increase of \$500,000 to implement a systematic process to review, identify, and catalog technical barriers to trade and other technical requirements that limit export opportunities for U.S. agricultural products in the top 30 U.S. export markets. Presumably, the private-sector representatives faced with these barriers to trade are better able to identify the problem and propose solutions to these market access problems. Why devote the time and effort at this time to the compilation of a catalog of barriers to trade?

Answer. FAS receives daily numerous questions regarding various types of market access issues. These range from persons wanting to start-up in the export market to current high-volume exporters with a newly identified (minor or major) barrier. Servicing these questions in a systematic and consistent manner will remain an ongoing challenge. Providing FAS and its key export development partners with improved tools is a key function of this initiative. It will serve both daily market servicing and outreach as well as strategic issue resolution.

A major gain in the Uruguay Round was agreement to include disciplines on technical barriers to trade. Elaboration of the specific disciplines in both the Agreement on Technical Barriers to Trade and the Agreement on the Application of Sanitary and Phytosanitary Measures is continuing, especially with regard to harmonization, equivalency and consistency. Clearly a starting point for a meaningful discussion of all these is knowing how transparent or non-transparent a market is. This initiative will take a more comprehensive, detailed approach to transparency issues with respect to U.S. agricultural export interests in the top 30 U.S. markets.

Transparency is to know in advance what will be expected if I want to export x product to y country. This information is not always readily available. This initiative is in line with the objectives of improved government services and more systematic servicing and outreach to current and potential U.S. agricultural exporters.

Question. In fiscal year 1996, FAS located staff with the California, Colorado, and Oregon State Departments of Agriculture and the Iowa State Office of USDA's Farm Service Agency. How has the expenditure for these domestically located FAS personnel resulted in increased exports? Can you quantify this?

Answer. Increased agricultural exports are generated by established exporters and new-to-export companies and cooperatives. USDA is engaged in a massive domestic awareness campaign highlighting export opportunities, and the supportive nature of USDA export assistance programs. USDA established the four domestic offices for FAS personnel to be closer to provide first hand export counseling. This counseling and use of USDA export assistance programs has gotten some companies to take the first step. The resultant sales represent tangible evidence of USDA's commitment to expanding the number of exporting companies and can be linked to the efforts of our domestic offices in partnership with State Departments of Agriculture.

Question. How does "Outreach" to small, medium and new-to-export businesses help U.S. farmers? Is this function better provided by the Commerce Department?

Answer. Targeting small, medium and new-to-export companies in addition to cooperatives has led to a higher rate of export participation among these groups. USDA continues to expand its distribution of knowledge and information on export opportunities and export markets to a wide range of target groups and trade-assistance organizations. USDA is clearly best suited to assist established exporters and new-to-export companies in gaining entry to new markets and successfully selling new products because of an extensive agricultural attache network system overseas, the largest export information network in the world, and corresponding export programs and services designed specifically for agricultural companies and cooperatives. The expertise of the Department of Commerce, and focus of their export as-

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sistance and information network is strictly non-agricultural. In addition, USDA's partners with the Department of Commerce to provide a seamless delivery system to companies seeking to export such non-agricultural, yet related, products as fertilizer, pesticides or agricultural equipment. The USDA has in place solid industry partnerships, and a efficient and effective delivery system to serve agricultural companies wishing to export overseas which is second to none.

Question. How much did the 48 outreach events cost per the approximately 2,100 participants?

Answer. As part of the 1996 USDA Global Attache Conference, FAS in partnership with FSA and the State Departments of Agriculture held 48 outreach events in 46 States plus Puerto Rico. Approximately 2,100 people attended, but thousands more were indirect participants contacted via extensive local television, radio and newspaper and magazine articles. The cost of the participating attaches at each of the events was minimized by arranging for many to simply stop at a selected state on the way to the conference or returning to their foreign post. The events, while organized and publicized by State Department of Agriculture officials, offered opportunities for local news coverage touting the success of a community business or highlighting the potential impact of exports on local transportation, manufacturing or financial services. The overall cost for attache participation which would include any additional air fare, per diem, and related expenses was under \$100,000, but the extent of contact, that is the inclusion of indirect participants, far exceeds the impression provided by the 2,100 estimate and must be factored in accordingly.

Question. The FAS budget request reads as follows: "With the privatization of many markets and the more disciplined use of export subsidies in the post Uruguay Round environment, the value of the more traditional marketing effort of the FMD (Foreign Market Development Cooperator Program) will take on an increasingly important role in the U.S. Long Term Agricultural Trade Strategy (LATS). While the nature of these mid-to long-term marketing programs tends to make measuring the overall success of the program difficult, it is quite clear that the FMD will play a key role in implementing the LATS and reaching the Department's Export Goal 2000. The FMD has already contributed to this effort, with the value of U.S. exports of bulk commodities (wheat, course grains, rice, soybeans, cotton, tobacco, pulses, peanuts, and others) having increased from \$18 billion to \$26 billion in the years 1991-1996." Why are you cutting the budget for this program from \$27.5 million to \$22 million?

Answer. The decision to propose reduced funding for the FMD was not easy to make but simply reflects the fiscal realities we all face as we move toward the objective of a balanced budget by the year 2002. The constraints on both the mandatory and discretionary accounts required a number of difficult choices to be made, including the proposal to reduce funding for the FMD program as well as other market development activities. The impact of the reduced level of federal contribution can be offset by higher contribution levels from program participants.

Question. Under the heading Research and Scientific Activities, FAS noted that it recruited a California confectionery company to form a joint venture with an Irish counterpart using economic growth and job creation as a "common ground upon which lasting peace can be built." Further, it noted that "discussions are still underway with a recruited Fortune 500 agricultural company to form a similar relationship in Ireland." What did this cost and how did/will U.S. farmers benefit from this activity?

Answer. FAS costs were minimal in this effort, consisting only of a small portion of one staff person's time, to help develop a list of American food companies and agricultural cooperatives that were interested in exploring investment opportunities in Ireland. This included preparations for the White House Conference on Trade and Investment with Ireland. While the joint venture of the California and Irish confectionery companies was promising, they have since terminated their partnership due to a lack of agreement on whether the U.S. company would be a partner or a customer for distribution of product. No sales of U.S. agricultural products resulted from the partnership.

With regard to the Fortune 500 agricultural companies recruitment efforts, no partnership has resulted.

QUESTIONS SUBMITTED BY SENATOR BUMPERS

VALUE-ADDED V. BULK COMMODITY

Question. Shouldn't the higher levels for value-added products help offset the lower levels for rough grains?

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Answer. Yes. For fiscal year 1997, USDA is expecting overall U.S. agricultural exports will decline to \$56.5 billion, down roughly \$3.5 billion from the record level set in 1996. This overall expected decline is entirely attributable to lower bulk commodity exports, led by wheat and coarse grain exports which are forecast to fall by a combined \$5.4 billion. Partially offsetting this bulk commodity decline, U.S. exports of value-added (or high-value) agricultural exports are projected to rise \$2.5 billion to a new record high of \$33 billion.

While 1997 is expected to be a disappointing year for wheat and coarse grains, the longer term prospects for these and other bulk commodities are decidedly more bullish. By the year 2002, USDA baseline estimates project the volume of U.S. wheat exports will rise by 47 percent from 1997 levels and coarse grains will rise by 35 percent. With high-value exports expected to grow by 27 percent during the same period, this means U.S. agricultural exports will be advancing along a broad front as we enter the 21st century with total farm product exports approaching \$70 billion by 2002.

Question. What are the ratios for these categories of exports?

Answer. In fiscal 1997, U.S. exports of bulk commodities are forecast to total \$23.5 billion, representing 41.5 percent of total agricultural exports. High-value products are forecast to reach \$33 billion, accounting for the 58.5 percent of total exports.

Question. How much has each category increased or decreased from the previous year?

Answer. Bulk commodities' share of total U.S. agricultural exports has declined, from 48 percent in 1996 to 41.5 percent projected for 1997. Conversely, high value products' share of the total has increased from 52 percent in 1996 to a projected 58.5 percent in 1997. These developments are part of a longer term trend that has seen bulk commodities' share of total U.S. agricultural exports fall from 70 percent in 1980 to the current estimate of 41.5 percent, while high-value products have gone from 30 percent in 1980 to almost 58.5 percent projected for 1997. By 2002, USDA projects high-value products will account for 60 percent of total agricultural exports.

FOOD SAFETY OF IMPORTS AS A TRADE ISSUE

Question. Because we are entering a global food market, what can be done to prevent problems like we have seen last week with the case of tainted strawberries from Mexico?

Answer. FAS is very actively engaged in the international processes fostering trade in agricultural and food products. FAS focuses attention on rules, procedures and guidelines to expand U.S. agricultural exports, but we are also keenly aware these same rules must apply to U.S. imports. The experience with strawberries again reminds us that no process is perfect. Within its mission goal as a trade agency, FAS has taken on this and other similar food safety issues (such as E. coli in apple juice to Japan): within hours FAS responded definitively to foreign countries' concerns that U.S. shipped product may have included unsafe lots of specific products. FAS will continue to work with other regulatory agencies to provide foreign partners these types of timely, valuable information. FAS also continues to work within established U.S. inter-agency processes to further international standardization for food safety concern.

IMPORTANCE OF EXPORTS TO U.S. AGRICULTURE

Question. Is the fact that the agricultural sector is twice as dependent on exports (and projected to be 2.5 times as dependent by the year 2000) than other sectors of our economy a good sign or a bad sign?

Answer. We feel this is a good sign as it reflects the growing competitiveness of the U.S. agricultural sector in the global market place. Furthermore, the expansion of U.S. agricultural trade results in increased employment for U.S. citizens and increased profits for U.S. companies. It also allows U.S. companies to realize significant economies of scale, which can lower prices for U.S. consumers. Without the positive stimulus of an expanding export market, many U.S. agricultural industries would be forced to contract significantly. Exports represent the future of American agriculture. This is why USDA is so keenly interested in opening foreign markets and using its export programs to counter the efforts of competitor governments who use their own well funded programs to give their producers an advantage in the global battle for market share. In the wake of the FAIR Act, increasing export opportunities is one of USDA's highest priorities since export expansion has become a key component of the safety net for our producers.

Question. Does this mean that agriculture is more vulnerable to the often disruptive nature of foreign markets and foreign governments' trade policies?

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Answer. There is no denying that as our producers become more fully integrated in the global food market, the possibility of facing disruptions rises. This is an inherent risk with doing business internationally. However, USDA is doing everything in its power to ensure that disruptive actions are minimized. For example, the USDA puts a premium not only on opening foreign markets but ensuring there is no backsliding on prior commitments by our trade partners. We see the biggest threat coming from sanitary and phytosanitary (SPS) barriers where governments in the past have resorted to unsound science to justify restricting other countries' access to their markets. For that reason, we have increased the level of our resources devoted to monitoring other countries actions in this area and, if problems arise, we will do whatever is necessary to negotiate a solution that protects our industry's interests as we did when U.S. poultry exports to Russia were halted.

CLARIFICATION OF AQUACULTURE V. SEAFOOD

Question. You indicated the \$2.9 billion sales in edible fish and seafood was in addition to "agricultural" exports. Why are they not considered part of "agricultural" exports?

Answer. Traditionally, exports of products such as seafood and solid wood products were handled by the Department of Commerce and, therefore, have not been included as "agricultural" exports. In terms of FAS programs, Congress has defined fishery products as agricultural products. Now that we are actively working to open and develop markets for fishery products, we will explore incorporating fishery products trade in the agricultural statistics.

Question. Why did the edible fish and seafood exports fall from the 95 level?

Answer. The value of exports fell primarily because of lower prices for salmon and crab. Large increases in farmed salmon production in Norway and Chile have depressed world salmon prices in general and increased competition, weakening prices to our number one market, Japan.

Question. What was the balance of trade in edible fish and seafood for that year?

Answer. We imported \$6.6 billion of seafood products in 1996 resulting in a trade deficit of \$3.7 billion. Shrimp accounted for 37 percent of these imports.

Question. How is the domestic demand for these products affecting our export and import activities?

Answer. Many of our exports consist of products where our supply exceeds U.S. demand (e.g., monkfish, squid, dogfish, frozen salmon) and include products such as sockeye salmon and monkfish livers which are exported for top dollar. Primarily we import products that are not readily available in the U.S. (i.e., shrimp, year-round fresh salmon, swordfish, etc.)

DEVELOPING MARKETS FOR PORK

Question. What will be the short and long term effect of the Taiwan pork health problems for US exports and US producers of pork and other agricultural commodities?

Answer. The immediate effect of the foot-and-mouth disease (FMD) outbreak in Taiwan has been an increase in orders from Japan for U.S. fresh/chilled pork. The sharpest impact is expected to occur beginning in July, when Japan's stocks of frozen pork are drawn down, and Japan's gate price (minimum import price) for pork is reduced. Total U.S. pork exports for 1997 are now forecast to increase by 44 percent over 1996. This represent an increase of 23 percent over pre-FMD estimates.

Taiwan is expected to remain out of the pork exporting business for 3 to 5 years, and will find it difficult to reestablish its dominant position in the Japanese market. This absence will provide U.S. exporters the opportunity to improve their trade contacts within the Japanese industry and make permanent gains in market share.

U.S. pork producers are likely to see improved prices this year. Increased domestic demand for corn and soybeans will likely offset any reduction in demand from Taiwan.

The outbreak of foot-and-mouth disease among Taiwan's swine population now affects 3,255 of Taiwan's estimated 25,000 hog farms. Taiwanese government policy requires the destruction of all hogs on infected farms, a number that now totals over 2.7 million head. Estimates for the recovery of Taiwan's pork industry range from 3 to 5 years.

The ban on exports of Taiwanese pork has left a substantial gap in Japan's supply of imported pork. This gap has created an opportunity for U.S. pork exporters to increase their market share in Japan. U.S. pork exports to Japan are forecast to increase an additional 123,000 MT in 1997. This would raise U.S. pork exports from 6.5 to 8 percent of total domestic production in 1997.

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DEVELOPING MARKETS FOR BEEF

Question. Can U.S. beef gains in Korea offset our problems with the EU?

Answer. We do not expect sales of U.S. beef to the EU to decline dramatically. As a matter of fact, U.S. beef exports to the EU have recovered since the imposition of the beef hormone ban, increasing from \$18 million in 1989 to about \$30 million in 1996. U.S. sales of beef to Korea, our third largest beef market, are expected to grow in 1997, as Korean imports are forecast up 19 percent for the year to 234,000 metric tons. This year, we expect U.S. beef exports to increase 19 percent to \$330 million. The U.S. should maintain its majority share in 1997 as U.S. beef does well in the Hotel/Restaurant (HRI) sector. This sector accounts for over 60 percent of total beef consumed in Korea. Also, some chilled beef imports are expected to enter Korea this year, which should benefit the United States. We expect continued growth in beef exports, as market access increases under the U.S.-Korea Beef Agreement. Under this agreement, the amount of beef permitted to be imported for private sector sales will increase annually until January 1, 2001. At that time, all non-tariff barriers to beef imports, including state trading, will be removed.

Question. What is the state of beef and other commodity access to the EU?

Answer. We work to preserve or expand market access for a variety of products, both through the WTO and through bilateral contact with the Commission and EU member states. The EU remains the second largest export market for U.S. agricultural products (after Japan) and over the last five years, the value of agricultural exports to the EU has grown 17 percent to \$9 billion. Major components of our trade with the EU include soybeans (\$2.3 billion), forest products (\$1.2 billion), tree nuts (\$842 million), tobacco (\$653 million) and coarse grains (\$375 million). Consumer-oriented products show particular promise and (as a group) have grown from \$1.8 billion to \$2.5 billion over the past 5 years. In 1989, the introduction of both the EU's ban on meat from hormone-treated animals and its Third Country Meat Directive resulted in a drastic decline in U.S. beef exports to the EU. U.S. exports of beef and beef offal plummeted from over \$100 million in 1985-87 to \$18 million in 1989. Since 1989, exports of beef have actually recovered (\$40 million in 1995, compared with \$15 million in 1985-87), but offal exports have not (\$13 million in 1995, down from \$90 million in 1985-87).

Question. What steps are being taken to eliminate barriers with the EU?

Answer. Many of our trade policy efforts with the EU in the past decade have focused on the meat and livestock area. Both before and after implementation of the EU's Third Country Meat Directive, United States Government (USG) officials engaged in negotiations aimed at preserving access for our meat products. In 1992, conclusion of the U.S.-EU Red Meat Agreement succeeded in eliminating many of the barriers that had been imposed on our beef industry, and U.S. beef exports recovered somewhat.

Unfortunately, because of the hormone ban, U.S. offal trade has not recovered, and beef exports have not been able to grow as they otherwise would have. After years of fruitless attempts to resolve this issue bilaterally, and with the improved leverage of the Sanitary and Phytosanitary (SPS) Agreement and the dispute settlement procedures in the WTO, in 1996 the USG embarked upon a dispute settlement process within the WTO. The three-member panel of judges selected to review the case have concluded all their meetings, and a final report is expected in late May 1997. We are hopeful that the outcome will be in the U.S.'s favor and will result in elimination of the EU ban. In recent years, the EU has been harmonizing its directives on the whole range of animals and animal products (including fish products). We have been negotiating an equivalence agreement, in order to preserve U.S. trade in these products. We have succeeded in negotiating terms of trade for most product areas which will allow U.S. trade to continue. We are still trying to finalize details, particularly regarding poultry inspection.

Question. What effect has the BSE problems with British beef had on U.S. exports?

Answer. The only direct effect has been an increase in U.S. exports of beef to the United Kingdom, which jumped from 587 metric tons in 1995 to 1,384 metric tons in 1996. Indirectly however, fears over BSE caused considerable anxiety among consumers in important markets for U.S. beef. This is particularly true in Japan, where the combination of the BSE scare along with unexplained outbreaks of *E. coli* dampened beef consumption and led to slower than expected growth in U.S. exports. We expect to see a recovery in Japan's beef consumption over the course of 1997. Though no cases of BSE have ever been recorded in the United States, the controversy surrounding BSE has had an impact on imported beef in a number of other markets, particularly in Asia.

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DEVELOPING MARKETS FOR RICE

Question. Of the \$125 million in U.S. rice sales to Japan, how much is being consumed in that country rather than being used for other purposes such as meeting their own foreign food assistance needs?

Answer. Of the approximately 200,000 tons of U.S. rice purchased by Japan during their 1996/97 import campaign, 13,000 tons purchased under the semi-private Simultaneous-Buy-Sell (SBS) system is known to have entered regular marketing channels. Of the remainder, the Government of Japan (GOJ) has announced its intention to use up to 30,000 tons in food aid shipments. It is believed that all, or almost all, of the remaining amount is currently in GOJ stockpiles.

Question. What is the long-term outlook for rice exports to Japan?

Answer. The long term outlook is excellent as long as the GOJ continues to fulfill market access commitments. The GOJ has repeatedly stressed its commitment to buying the highest quality rice available for its domestic consumers. In addition, the GOJ has stated its intention to monitor SBS purchases as an indicator of consumer preference for foreign rice. In both of the first two years of Japan's minimum access rice imports the United States has dominated SBS purchases.

Question. What is the current state of the Japanese "mind set" toward consumption of U.S. rice?

Answer. Japanese consumers have had little exposure to foreign rice and U.S. rice exporters are actively engaged—under the auspices of the USA Rice Federation and with the help of USDA—in promoting U.S. rice in Japan. We have full confidence in the high-quality of U.S. rice and the eventual acceptance of U.S. rice by Japanese consumers as long as the GOJ continues to provide market access for foreign rice.

GENETICALLY ALTERED PRODUCTS

Question. You mentioned successes in Japan and the EU in introducing genetically altered products. Still, we hear reports about serious objections to those products overseas. What is the current outlook for overcoming these obstacles?

Answer. Our biggest concern now is that consumers, especially in Europe, are not receiving the best information and are voicing strong resistance to biotech products. This is a major topic in our conversations with various EU government officials and with U.S. and EU industry. We are encouraging the private sector to do more in the way of consumer education. We are also working to ensure that any labeling requirements that are adopted in foreign markets are fair and reasonable and do not amount to disguised restrictions on trade.

NEW AREAS OF FAS FOCUS

Question. What do the shifts in your focus from Europe to the Pacific Rim and Latin America mean for various U.S. commodity producers and regions?

Answer. The shift in focus from Europe to the Pacific Rim and Latin America is primarily due to changes in market demand and potential for export growth. FAS' goal is to maximize total U.S. agricultural exports with a focus on emerging markets and trade opportunities created by recent trade agreements, promotion of high value products, and export assistance for small-sized, new-to-export entities and cooperatives.

While Europe continues to be an important market for U.S. agricultural products, it can no longer be viewed as a high growth market in comparison to the potential in the Pacific Rim and Latin America. This change in focus has led to a gradual decline in USDA export promotion funding for Europe. Although changes in the European Union's agricultural policy have had notable effects on demand for U.S. agricultural exports, Europe is still our most important market for soybeans, peanuts, rice, prunes, raisins, tree nuts, walnuts and almonds.

FAS continues to take a proactive approach to position our products in growth markets to help ensure U.S. agriculture's continued export success and contribution to farm income and rural development. The growth in U.S. agricultural exports to Latin American and Pacific Rim markets is more than offsetting any declines in Europe. For example, twenty years ago the EU accounted for 31 percent of total U.S. agricultural exports while the Pacific Rim accounted for only 24 percent. Today the EU accounts for only 16 percent, while the Pacific Rim accounts for approximately 43 percent. FAS will continue to work closely with the industry to capitalize on trade opportunities and provide support for those products and activities in those markets that hold the greatest export potential for the American farmer.

Question. Does this reflect that there are going to be winners and losers among American farmers based on this change of emphasis?

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Answer. No. We do not believe our shift in focus will produce any losers among American farmers. In fact, that is the very thing we hope to prevent by refocusing our resources to higher return to mission markets like the Pacific Rim. However, educating an industry as broad as agriculture on the importance of these export markets and how to succeed in them is important to maximizing the numbers of winners. Therefore, one of our major initiatives over the past couple of years has been to boost our resource commitment to outreach activities. By partnering with commodity organizations, government agencies, Congress, and others, in sponsoring and participating in export seminars and trade events around the country, we can help our producers and processors stay current on the strategic shifts in agricultural markets and informed on how USDA programs, activities, and resources can help them compete in the global market as we move into the 21st century.

MARKET ACCESS PROGRAM

Question. How have the recent legislative changes to the Market Access Program (formerly the Market Promotion Program) changed the programs function in practice?

Answer. The Omnibus Budget Reconciliation Act of 1993 and the Federal Agriculture Improvement and Reform Act of 1996 have programmatically changed the MAP in the following manner:

- within the brand program, FAS gives priority assistance to small-sized entities and agricultural cooperatives;
- FAS limits assistance to promote a specific brand product in a single market to no more than 5 years;
- an eligible trade organization that receives assistance for generic promotion must provide a minimum contribution level of 10 percent. FAS has assigned the greatest weight to this factor in its allocation decisions to encourage a higher degree of cost sharing. As a result, the average level of contribution is 40 percent;
- each participant must certify that any Federal funds received supplement, but do not supplant, private or third party participant funds or other contributions to program activities;
- FAS no longer enters into direct agreements with large companies under the Export Incentive Program (a component of the MAP).

Question. What have been the results of those changes?

Answer. The most notable results stemming from the above-mentioned legislated changes are as follows: This year, FAS has targeted 84 percent of the brand promotion funds for small-sized entities and cooperatives, up from 76 percent in 1996. Funding for generic campaigns to assist small and new-to-export companies and cooperatives take advantage of real opportunities in international trade has also increased from 66 percent in 1996 to 72 percent in 1997. FAS has also responded to concerns raised by Congress and program critics by decreasing funding for large companies. Since 1996, only small entities and cooperatives have been eligible to receive promotional funds directly from FAS under the Export Incentive Program. FAS has also reduced funding available to MAP recipients to indirectly fund brand promotion by large companies by 75 percent since 1995. Beginning with the 1998 program, FAS will only provide assistance to small-sized entities and cooperatives within the brand program.

Question. Would you please provide your most recent breakdown of all MAP allocations (both your most recent actual figures and your most recent projected figures for the subsequent year) by entity for both generic and branded promotions and note which of the participants do not meet the definition of a small business?

Answer. In 1997, FAS made direct allocations to 64 nonprofit trade organizations and agricultural cooperatives. For purposes of determining size, the SBA size standards are most applicable to those U.S. commercial entities that receive indirect assistance through nonprofit trade associations and state regional trade groups. A list of the 1996 and 1997 budgets authorized for generic and brand promotions by organization follows.

[The information follows:]

Market Access Program allocations—fiscal year 1997

<i>Trade organization</i>	<i>1997 MAP allocation</i>
Alaska Seafood Marketing Institute	\$2,965,056
American Brandy Association—Export	36,294
American Forest & Paper Association	6,280,192
American Jojoba Association	176,324
American Seafood Institute/Rhode Island Seafood Council	592,923

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<i>Trade organization</i>	<i>1997 MAP allocation</i>
American Sheep Industry Association	95,141
American Soybean Association	2,203,929
Asparagus USA	162,938
Blue Diamond Growers	1,412,689
California Agricultural Export Council	525,178
California Cling Peach Growers Advisory Board	727,009
California Kiwifruit Commission	66,095
California Pistachio Commission	815,018
California Prune Board	2,538,590
California Strawberry Commission	471,614
California Table Grape Commission	1,987,929
California Tree Fruit Agreement	704,566
California Walnut Commission	2,566,006
Cherry Marketing Institute	154,361
Chocolate Manufacturers Association	721,310
Cotton Council International	9,261,438
Eastern U.S. Agricultural and Food Export Council	799,696
Florida Department of Citrus	4,247,525
Hop Growers of America	103,000
Kentucky Distillers Association	499,401
Mid-America International Agri-Trade Council	190,833
Mohair Council of America	75,000
National Association of State Departments of Agriculture	564,788
National Dry Bean Council	306,760
National Grape Cooperative	664,261
National Honey Board	132,953
National Peanut Council	837,544
National Potato Research and Promotion Board	1,290,688
National Renderers Association	301,885
National Sunflower Association	821,958
New York Wine and Grape Foundation	165,673
North American Blueberry Council	92,952
North American Export Grain Association	94,225
Northwest Wine Promotion Coalition	119,287
Ocean Spray International, Inc	319,848
Oregon Seed Council	180,540
Oregon-Washington-California Pear Bureau	974,151
Pet Food Institute	596,075
Raisin Administrative Committee	2,444,619
Southern United States Trade Association	3,097,777
Sunkist Growers, Inc	2,064,157
Texas Produce Export Association	42,222
The Catfish Institute	304,905
The Popcorn Institute	500,000
United Fresh Fruit and Vegetable Association	177,093
USA Dry Pea and Lentil Council	550,918
USA Fresh Sweet Cherry Promotion	840,401
USA Poultry and Egg Export Council	2,290,770
USA Rice Federation	2,911,598
USA Tomato	481,772
U.S. Apple Association	438,707
U.S. Dairy Export Council	1,881,135
U.S. Feed Grains Council	2,865,352
U.S. Livestock Genetics Export, Inc	739,981
U.S. Meat Export Federation	8,498,273
U.S. Wheat Associates	2,023,893
Washington Apple Commission	2,470,410
Western United States Agricultural Trade Association	4,481,370
Wine Institute	3,051,004
Total	90,000,000

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MAP participant	1996 ceilings	
	Branded	Generic
Alaska Seafood Marketing Institute	\$800,000	\$2,208,702
Almond Board of California		531,800
American Brandy Association—Export	208,146	138,565
American Forest & Paper Association		7,490,689
American Jojoba Association		165,500
American Seafood Institute/Rhode Island Seafood Co	259,202	244,798
American Sheep Industry Association		343,403
American Soybean Association		1,972,747
Asparagus USA		254,575
Blue Diamond Almond Growers	1,429,561	
California Agricultural Export Council		498,985
California Cling Peach Growers Advisory Board		740,000
California Kiwifruit Commission		200,363
California Pistachio Commission	207,778	657,878
California Prune Board	963,900	1,557,100
California Strawberry Commission		508,144
California Table Grape Commission		2,058,406
California Tomato Commission/Florida Tomato Comm		433,441
California Tree Fruit Agreement		601,477
California Walnut Commission		1,820,278
Cherry Marketing Institute		155,000
Chocolate Manufacturers Association	1,472,244	193,116
Cotton Council International		9,373,200
Eastern US Agricultural and Food Export Council	5,148,299	1,254,546
Florida Department of Citrus		4,280,355
Ginseng Board of Wisconsin		120,475
Hop Growers of America		94,676
Kentucky Distillers' Association	789,206	256,196
Mid-America International Agri-Trade Council	7,397,656	880,822
Mohair Council of America		75,000
National Association of State Dept. of Agri		547,513
National Dry Bean Council		320,129
National Honey Board	42,460	82,765
National Peanut Council	202,894	699,300
National Potato Promotion Board		1,365,000
National Renderers Association		380,306
National Sunflower Association		720,000
New York Wine and Grape Foundation	83,158	147,492
North American Blueberry Council		100,000
North American Export Grain Association		162,686
Northwest Wine Promotion Coalitions	89,142	218,990
Ocean Spray International, Inc	308,034	
Oregon Seed Council		168,000
Oregon-Washington California Pear Bureau		948,759
Pet Food Institute		1,145,449
Raisin Administrative Committee	231,513	2,190,759
Southern United States Trade Association	5,126,496	803,504
Sunkist Growers, Inc	2,418,571	
Texas Produce Export Association		150,000
The Catfish Institute		259,765
The Popcorn Institute		399,437
United Fresh Fruit and Vegetable Association		150,000
USA Dry Pea and Lentil Council		443,434
USA Fresh Sweet Cherry Promotion	0	760,647
USA Poultry and Egg Export Council	1,679,225	1,980,025
USA Rice Federation		3,189,073
U.S. Apple Association		413,235

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MAP participant	1996 ceilings	
	Branded	Generic
U.S. Dairy Export Council		1,642,437
U.S. Feed Grains Council		3,843,963
U.S. Livestock Genetics	244,717	785,095
U.S. Meat Export Federation	454,851	9,355,681
U.S. Wheat Associates		2,171,578
Washington Apple Commission		2,049,332
Welch's Food	613,044	
Western United States Agricultural Trade Assoc	6,409,844	1,091,405
Wine Institute	2,509,650	1,987,413

MAP participant	1997 ceilings	
	Generic	Branded
Alaska Seafood Marketing Institute	\$2,569,203	\$457,005
American Brandy Association—Export	124,126	105,874
American Forest and Paper Association	7,568,704	
American Jojoba Association	200,000	
American Seafood Institute/Rhode Island Seafood Co	172,854	500,000
American Sheep Industry Association	170,000	
American Soybean Association	2,550,929	
Asparagus USA	258,103	
Blue Diamond Growers		1,412,691
California Agricultural Export Council	649,837	
California Cling Peach Growers Advisory Board	798,931	
California Kiwifruit Commission	175,000	
California Pistachio Commission	721,853	257,250
California Prune Board	1,553,590	1,010,000
California Strawberry Commission	536,843	
California Table Grape Commission	2,348,272	
California Tomato Commission/Florida Tomato Committee	665,745	
California Tree Fruit Agreement	799,664	
California Walnut Commission	2,593,772	
Cherry Marketing Institute	165,292	
Chocolate Manufacturers Association	207,876	1,840,004
Cotton Council International	9,756,938	
Eastern US Agricultural and Food Export Council	1,100,000	3,600,000
Florida Department of Citrus	4,499,440	
Ginseng Board of Wisconsin ¹		
Hop Growers of America	125,000	
Kentucky Distillers' Association	446,159	582,847
Mid-America International Agri-Trade Council	1,000,000	5,700,000
Mohair Council of America	55,000	20,000
National Association of State Dept. of Agri	600,000	
National Dry Bean Council	728,469	
National Honey Board	44,582	100,000
National Peanut Council	1,251,544	
National Potato Promotion Board	1,674,984	
National Renderers Association	354,500	
National Sunflower Association	1,007,958	
New Jersey Fish & Seafood Marketing ²		
New York Wine and Grape Foundation	1,734	189,120
North American Blueberry Council	92,952	
North American Export Grain Association	200,000	
Northwest Wine Promotion Coalitions	283,874	
Ocean Spray International, Inc		319,848
Oregon Seed Council	207,540	

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MAP participant	1997 ceilings	
	Generic	Branded
Oregon-Washington California Pear Bureau	1,065,813
Pet Food Institute	1,100,053	.....
Raisin Administrative Committee	2,108,393	336,226
Southern United States Trade Association	900,000	4,800,000
Sunkist Growers, Inc .....	.....	2,593,546
Texas Produce Export Association	123,930	.....
The Catfish Institute	309,905	.....
The Popcorn Institute	522,078	.....
United Fresh Fruit and Vegetable Association	191,093	.....
USA Dry Pea and Lentil Council	585,918	.....
USA Fresh Sweet Cherry Promotion	858,020	.....
USA Poultry and Egg Export Council	2,671,174	1,388,426
USA Rice Federation	3,537,075	.....
U.S. Apple Association	505,548	.....
U.S. Dairy Export Council	1,934,781	.....
U.S. Feed Grains Council	4,085,338	.....
U.S. Livestock Genetics	793,202	335,500
U.S. Meat Export Federation	10,135,146	346,034
U.S. Wheat Associates	2,334,389	.....
Washington Apple Commission	3,198,266	.....
Welch's Food .....	.....	664,261
Western United States Agricultural Trade Assoc	1,300,000	6,200,000
Wine Institute	2,609,014	1,941,990
Totals	89,130,404	34,700,622
		123,831,026

¹ Applied, but not funded.

² Applied, but directed to work with the American Seafood Institute.

Question. Also would you please note the extent and the manner in which any branded promotion funds were provided to companies indirectly through trade associations or any other means?

Answer. Companies receive MAP assistance for brand promotions indirectly through trade associations. I will provide for the record a list of companies and the budgets for each that have been approved to date in 1996. The 1997 MAP allocation has just been completed. Funding available to large companies for brand promotions through trade associations was reduced by 35 percent in 1996, by 45 percent in 1997 and will be eliminated altogether in 1998.

[The information follows:]

MAP U.S. COMPANY BUDGETS FOR 1996

Company	Cooperative	Size	Budgeted
21st Century Genetics	S	\$15,500
A&F International	S	2,500
ABS International	S	44,084
Accelerated Genetics	S	10,000
Advance Food Company	L	30,000
Advanced Nutritionals Corporation	S	132,500
Ag-Link International, Inc	S	6,000
Agri BeefCo	S	12,000
Agri Trade International, Inc	S	7,500
Agrisource, Inc	S	15,000
Agway Inc	S	9,666
AJC International	L	17,500
Alle Processing Corporation	S	18,250
Allied Foods, Inc	S	75,000
Allied Processors, Inc	S	46,000

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MAP U.S. COMPANY BUDGETS FOR 1996—Continued

Company	Cooperative	Size	Budgeted
Allied-Sysco	S	.....	80,000
Alpine Lace	S	.....	50,000
Alta Genetics	S	.....	17,033
Amal Meat Corp	S	.....	37,500
American Ag-Tec International	S	.....	47,000
American Connoisseur	S	.....	9,500
American Eagle Beverages, Inc	S	.....	150,000
American Home Food Products	L	.....	20,000
American Popcorn Corp	S	.....	112,750
American Protein Corporation	S	.....	69,125
American Soy Products	S	.....	23,800
American Standard Products, Inc	S	.....	25,000
American Tanning & Leather Company	S	.....	20,000
AMES International, Inc	S	.....	40,000
AMPC, Inc	S	.....	63,932
Amy Foods, Inc	S	.....	5,000
Anacon Foods Company	S	.....	21,500
Andes Candies, Inc	S	.....	74,000
Arciero Winery	S	.....	6,000
Ariel Vineyards	S	.....	28,000
Arizona Pepper Products Co	S	.....	48,000
ASB Group International	S	.....	415,000
Aspen International Export Inc	S	.....	17,000
Audubon Cellars	S	.....	4,500
Austin Nichols & Co., Inc	L	.....	79,999
Azmex Foods, Inc	S	.....	39,000
A. Smith Bowman Distillery, Inc	S	.....	49,500
Babe Farms	S	.....	30,000
Baldwin Vineyards	S	.....	5,000
Barber Foods	L	.....	60,000
Barnaby's Foods	S	.....	5,000
Bay Pac Beverages	S	.....	40,000
Bay World	S	.....	8,500
Beaverton Foods, Inc	S	.....	10,000
Beechnut (Ralston Foods)	L	.....	47,500
Beehive Botanicals	S	.....	15,000
Beer Nuts Inc	S	.....	30,000
Ben and Jerry's	S	.....	25,000
Bernardi Italian Foods, Inc	S	.....	26,500
Bernardo Perez & Associates	S	.....	40,000
Berrywine Plantations, Inc	S	.....	20,000
Best Brands Inc./American Products, Inc	S	.....	25,000
Better Baked Foods, Inc	S	.....	10,000
Biagio's Gourmet Foods, Inc	S	.....	58,000
Bil Mar Foods	L	.....	9,000
BioSan Laboratories, Inc	S	.....	120,000
Birdie Corp	S	.....	10,000
Black Mountain Brewing Co	S	.....	40,000
Blue Bell Creameries, L.P	L	.....	60,000
Blue Diamond Growers	Y	.....	1,479,561
Blue Sky Natural Beverage Co	S	.....	10,000
BMTS International	S	.....	40,000
Boboli International, Inc	S	.....	5,000
Bolinger Marketing Inc	S	.....	7,500
Bovine Elite, Inc	S	4,000
Brach & Brock Confections	S	160,000
Brice Foods, Inc	S	100,000

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MAP U.S. COMPANY BUDGETS FOR 1996—Continued

Company	Cooperative	Size	Budgeted
Brown & Haley		S	58,000
Bruce Foods Corporation		S	249,000
BST International Corporation		S	20,000
Bunge Foods		L	6,000
Bush Brothers & Company		L	49,500
B&H General Supply & Marketing Corp		S	99,250
B.M. Lawrence And Company		S	31,000
Cakebread Cellars		S	4,000
Calico Cottage Candies, Inc		S	15,475
California Kazakhstan Trading Company		S	87,000
California Sun Dry Foods		S	31,000
Campbell Soup Company		L	145,610
Canadaigua Wine Company		L	132,779
Capital Pet Foods		S	76,000
Cargill, Inc., Feed Division		L	14,500
Carlton Bar A Ranches		S	4,000
Cascade Clear Water Co		S	24,000
Cascadian Farm		L	20,000
Cecchetti Sebastiani Cellar		S	8,000
Cenzone Tech Inc		S	33,000
Cha Cha Foods		S	50,000
Charleston Tea Plantation, Inc		S	35,000
Chef Paul Prudhomme's Magic Seasoning Bl		S	40,000
ChemGen		S	18,560
Chenango Valley Pet Foods		S	49,900
Cherrex Corporation		S	185,000
Cherry Central		S	7,873
Chez de Prez Cheesecake, Inc		S	99,000
Chihade International, Inc		S	100,000
Childers Food Products		S	45,000
Chukar Cherry Company		S	20,000
Clawisland Foods, Inc		S	24,200
Cloud Nine, Inc		S	26,500
Coast Ridge Cellars		S	57,500
Coastal Health-Age Beverages		S	50,000
Cody's Real Pet Products		S	15,000
Coffee Masters		S	38,424
Collin Street Bakery		S	49,000
Compass West		S	20,000
Conagra Frozen Foods		L	136,000
Concannon Vineyard		S	26,300
Continental Imports, Inc		S	49,000
Continental Mills, Inc		L	15,000
Cookie Investment Co., Inc		S	9,000
Cookieetree Bakeries		S	97,000
Cornucopia Pet Foods, Inc		S	100,000
Country Fresh Farms International		S	10,000
CPC International/Best Foods Exports		L	133,300
Craft Beers International		S	5,000
Creekside Vineyards		S	2,000
Crichton Hall Vineyard		S	2,500
Crown Products, Inc		S	180,000
Crystal Cream & Butter Company		S	20,000
Crystal International Corporation		S	210,000
Crystal Ocean Seafood, Inc		S	23,000
Cumberland Packing Corporation		S	37,750
Custom Industries, L.P		S	19,951

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MAP U.S. COMPANY BUDGETS FOR 1996—Continued

Company	Cooperative	Size	Budgeted
Cuvaison Winery		S	20,000
C.S. Steen		S	5,000
C.H. Guenther & Sons, Inc. dba Pioneer F		L	35,000
Da Vinci Gourmet, Ltd		S	20,000
Dae Julie, Inc		S	28,000
Dahlgren & Company, Inc		S	16,275
De Beukelaer Corporation		S	35,000
Decas Cranberry Sales, Inc		S	20,000
Deep Sea Fish		S	17,300
Delicato Vineyards		S	123,000
DeLoach Vineyards, Inc		S	14,000
Desert Rose Foods, Inc		S	40,000
Devlin		S	1,500
Diamond Pet Foods		S	39,050
Distributors International		S	67,500
Downey's International Inc		S	5,000
Dreyer's Grand Ice Cream		S	60,000
Dry Creek Vineyard		S	1,500
Dr. Konstantin Frank		S	2,000
Duck Walk Vineyards		S	3,000
Durkee-Mower, Inc		S	77,500
DXR International, Inc		S	33,000
Earthrise Company		S	48,000
East Coast Seafood, Inc		S	108,750
Eastern Food Exporters		S	7,000
EBS, Inc		S	5,000
Edy's Grand Ice Cream		L	23,833
Eli's Chicago's Finest Cheesecake		S	36,500
Empire Kosher Poultry, Inc		L	10,000
Entenmann's Inc		S	25,000
Entertainment Foods, Inc		S	39,000
Equipment Team Hawaii		S	31,000
Excalibur Sires		S	4,000
Excel		L	10,000
Excel Trade Limited		S	37,000
Export Trade Of America		S	55,000
E. Boyd & Associates, Inc		S	25,000
E. & J. Gallo		L	915,000
Fantastic Foods, Inc		S	20,000
Far Niente		S	27,000
Farmland Industries, Inc		L	20,000
Fast Food Merchandisers		L	15,000
Ferrara Pan Candy Company		S	2,000
Fetzer Vineyards		L	45,000
Finnbar International LLC		S	1,150
Firestone Vineyard		S	3,000
Florida European Export-Import Co., Inc		S	13,000
Flower City Nurseries		S	25,000
Food Producers International		L	19,140
Foppiano Vineyards		S	28,000
Foulds, Inc		S	50,000
Franciscan Vineyards, Inc		S	6,000
Freemark Abbey Winery		S	4,000
French Gourmet Inc		S	125,000
Frontier Foods, International		L	20,000
Frontier Trading		L	48,000
Fruits International, Inc		L	70,000

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MAP U.S. COMPANY BUDGETS FOR 1996—Continued

Company	Cooperative	Size	Budgeted
Furman Foods Inc		S	20,000
Garden of Eatin' Inc		S	29,000
Garuda International, Inc		S	9,500
General Mills, Inc		L	32,700
Genex Coop		S	11,500
Gerber Agri, Inc		L	27,500
Gering and Son		S	29,000
Geysler Peak		S	31,500
Gibson Goodies Inc		S	8,000
Giumarra Vineyards		L	15,000
Global Beverage Company		S	50,000
Global Export Marketing Company		S	110,000
Golden State Vintners		S	90,000
Golden Temple Bakery, Inc		S	38,000
Golden Valley Microwave Foods		L	71,700
Goldenberg Candy Co		S	58,000
Good Kama Foods, Inc		S	5,000
Gossner Foods, Inc		S	39,000
Gourmet House		L	40,988
Graceland Fruit Cooperative, Inc	Y .....	.....	13,000
Great Crescent International Inc		S	189,000
Greater Pacific Foods		S	24,000
Grimmway Enterprises, Inc		L	30,000
Groeb Farms, Inc		S	16,125
Guglielmo (Emilio) Winery		S	20,000
Gulf Pacific Rice Co., Inc		S	49,500
Hale Indian River Groves		L	25,000
Hansa-Pacific Associates, Inc		S	25,000
Hansen Beverage Company		S	85,000
Hansmann's Mills, Inc		S	29,000
Harvest International Company		S	35,000
Hawaiian Sun Products		S	20,000
Healthy Times		S	27,000
Heaven Hill Distilleries, Inc		S	59,801
Heinz Pet Products		L	211,110
Henry Estate		S	6,000
Herman Goelitz, Inc		S	117,000
Herr Foods Inc		S	10,000
Hershey Foods Corporation		L	224,610
Heublein, Inc		L	60,000
Hills Pet Nutrition, Inc		L	61,800
Homeland Fruit Company		S	20,000
Honee Bear Canning		S	50,000
Honway		S	2,500
Hormel Foods		L	35,000
Hsu's Ginseng Enterprises, Inc		S	90,000
Hudson Foods, Inc		L	24,375
Hughson Nut Marketing, Inc		S	18,000
H.J. Heinz Company Ltd		L	50,000
H.K. Brewing Company, Ltd		S	25,000
Idahoan Foods		S	150,000
Imagine Foods, Inc.,		S	100,000
Interfrost		S	150,000
Inter-group Trade Services Corp. (ITSC)		S	100,000
International American Supermarkets		S	470,000
International Food Concepts		S	150,000
International Grocers, Inc		S	40,000

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MAP U.S. COMPANY BUDGETS FOR 1996—Continued

Company	Cooperative	Size	Budgeted
International Industries Corporation	S	100,000
International Market Brands	S	229,000
International Marketing Systems, Ltd	S	50,000
International Multifoods Corporation	L	180,700
International Pet Products, Inc	S	108,000
Island Coffee Company	L	15,000
Ital Florida Foods, Inc	S	12,000
I.M.G. Enterprise Inc./Cherry Lake Farm	S	45,000
J&J Snack Foods	S	18,000
Jack and Jill Ice Cream Company	S	150,000
Jardine Foods	S	20,000
Jasper Wyman & Son	S	47,000
Jersey Asparagus Farms, Inc	S	8,500
Jewel Date Company	S	29,000
Jim Beam Brands Co	L	387,934
J-K Products International	S	15,000
Johnsonville Foods	L	9,750
Johnstown Bean Company	S	5,000
Jones Dairy Farm	L	64,000
Joseph E. Seagram & Sons, Inc	L	43,093
Joseph Gallo Farms	S	10,000
J.P. Sullivan & Company	S	6,000
Kal Kan Foods, Inc	S	30,000
Kalsec Inc	S	11,640
Karly	S	3,000
Kashi Company	S	11,000
Kautz Ironstone Vineyards	S	40,000
Kendall-Jackson Winery	S	15,000
Kenwood Vineyards	S	8,000
Kidd & Company, Inc	S	134,000
King B Gourmet Foods	S	15,000
Knudsen & Sons, Inc	L	30,000
Korbel Brands	S	45,977
Kozy Shack, Inc	S	192,500
KSM Seafood Corporation	S	85,000
Kwik Enterprises	S	20,000
La Tapatia Tortilleria, Inc	S	18,000
Lady-J, Inc	S	40,000
Lafayette Foods	S	24,000
Lamex Foods, Inc	S	62,500
Land O'Lakes Food Ingredients Division	L	18,810
Laurel Glen Vineyard	S	2,500
Lawrence Foods, Inc	S	35,000
Leprino Foods	S	9,000
Liberty Orchards Co., Inc	S	18,000
Lincoln Snacks Company	S	122,500
Little Lady Foods, Inc	S	77,500
Long Island Seafood Export	S	6,500
LP International	S	77,000
Lucks Food Decorating Co	S	100,000
Lucky States Trading Company	S	15,000
Lyons Magnus	S	15,000
M&R Company	S	18,000
Maker's Mark Distillery, Inc	L	34,477
Mama Tish's Italian Specialties, Inc	S	28,500
Manna Pro Milk Products Inc	L	9,550
Maple Grove Farms of Vermont	S	25,000

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MAP U.S. COMPANY BUDGETS FOR 1996—Continued

Company	Cooperative	Size	Budgeted
Maplehurst Genetics		S	4,000
Market Makers, Inc		S	150,000
Matanzas Creek Winery		S	3,000
Matt Brewing Company		S	50,000
Maui Pineapple Company, Ltd		L	20,000
Mauna Loa Macadamia Nut Corp		S	137,000
Mazda Trading Co., Inc		S	31,000
McFarland's Foods, Inc		S	20,000
McIlhenny Company		S	190,000
Mederer Corporation		S	220,000
Merrick Petfoods, Inc		S	40,000
Merrick's, Inc		S	19,859
Merryvale Vineyards		S	45,000
Mi Mama's Tortilla Factory, Inc		S	7,500
Midamar Corporation		S	34,500
Mid-America Dairymen, Inc		L	30,000
Midwestern Pet Foods, Inc		S	76,250
Milk Specialties Co		S	31,200
Milward Enterprises, Inc		S	30,000
Mission Foods		L	15,000
Missouri Angus Association	Y		2,575
Mister Cookie Face		L	25,000
Molly's Foods, Inc		S	42,000
Mooney Farms		S	20,000
Morrison Farms		S	26,325
Motts International/Div. of Cadbury Bev		S	45,000
Mrs. Fields Inc		S	30,000
Mrs. Leeper's, Inc		S	20,000
Murphy-Goode Estate Winery		S	6,500
M&M/Mars, A Division Of Mars, Inc		L	276,610
Nabisco International Ltd		L	25,000
NAF International		L	91,000
Nancy's Pies, Inc		S	10,000
Nancy's Specialty Foods		S	79,000
National Raisin Co		S	20,000
Naturipe Berry Growers, Inc	Y		37,000
Nebraska Dairies		S	50,000
New Generations Dairy Cattle		S	11,974
New Venture Development Corp		S	40,000
Newman's Own Inc		L	91,500
Newton Vineyard		S	8,500
Norbest		L	5,000
Norpac Foods	Y		118,000
Norpro, Inc		S	25,000
Northeast Group		S	50,000
Northwest Packing Company		S	35,000
Nouveau International		S	50,000
NupacInternational, Inc		S	80,000
Nutrilicious Foods		S	40,000
Ocean Spray Cranberries, Inc	Y		338,534
Oceanica Trade & Investment, Inc		S	17,000
Oglesby Plant Laboratories, Inc		S	13,250
Old Salem Enterprises		S	5,000
Ontario International, Inc		S	120,000
Oregon Potato Company		S	22,000
Ore-Ida Foods		L	30,895
Organic Food Products		S	92,500

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MAP U.S. COMPANY BUDGETS FOR 1996—Continued

Company	Cooperative	Size	Budgeted
Organotech		S	40,000
Orion Seafood International, Inc		S	3,000
Otis McAllister, Inc		S	40,000
PA Producers Research & Develop		S	19,500
Pace Foods, Ltd		S	55,000
Pacific Valley Foods		S	13,000
Pamela's Products		S	10,000
Paramount Farms	Y		67,600
Pepperidge Farm Incorporated		S	51,610
Pet Center Inc		S	5,500
Pet Products Plus, Inc		L	74,960
Pete's Brewing Company		S	40,000
Petrofsky's International, Ltd		S	50,000
Phoenix Marketing		S	35,000
Pierce Foods		L	37,375
Pindar Vineyards		S	3,000
Pines International		S	135,000
Pioneer Snacks, Inc		S	5,000
Plantation Sweets		S	30,000
Pogue Industries, Inc		S	25,000
Powerfood Inc		S	150,000
Precise Pet Products		S	49,500
President Foods Ltd/GWB Foods		S	15,000
Presto Food Products, Inc		S	43,000
Prickly Pear Ranch		S	4,950
Prime Tanning Co., Inc		L	51,610
Primex		S	57,678
Prince of Peace Enterprises, Inc		S	101,000
Pro Bar Products, Inc		S	8,500
Pro Diet Pet Products		S	19,650
Providence Bay Fish Company		S	2,500
Purity Foods International		S	200,000
Quady Winery		S	9,500
Quality Products Intl., Inc		L	22,500
Racke		L	7,500
Ralston Purina International		L	213,310
Ramsey Popcorn Company, Inc		S	200,000
Raskas Foods, Inc		S	17,500
Red River Commodities, Inc		L	9,900
Reily Dairy and Food Company		S	15,000
Reimann Food Classics, Inc		S	15,000
Rhino Foods, Inc		S	7,500
Richland Beverage Corporation		S	25,000
Rim Export Consultants, LTD		S	18,200
Rio Del Mar Foods, Inc		S	40,000
River of Life		S	5,000
Robert Mondavi Winery		L	40,000
Rocco, Inc		L	30,000
Rocking JC Southwest Foods		S	20,000
Rockingham Poultry		L	45,000
Rocky Mountain Popcorn Co		S	7,000
Roman Meal Company		S	108,000
Roney-Oatman		S	49,850
Round Hill Winery		S	15,000
Royal Cake Company		S	5,000
Royal Pacific Foods		S	20,000
Royal Wine Company		S	130,000

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MAP U.S. COMPANY BUDGETS FOR 1996—Continued

Company	Cooperative	Size	Budgeted
Rubschlager Baking Corp	S	5,500
Rutherford Benchmarks, Inc	S	7,000
Sabroso Company	S	22,000
Safeway Inc	L	11,000
Sahagian & Associates, Inc	S	10,000
Santa Cruz Valley Pecan Company	S	30,000
Sargento, Inc	L	47,200
Schug Carneros Estate Winery	S	17,000
Schwan's Food Asia Pte. Ltd	L	80,200
Sea and Farmfresh Importing Company	S	33,000
Sea Fresh USA	S	4,800
Sea Watch International, Ltd	L	35,239
Seafood Exchange Seoul, Inc	S	6,000
Seafood Export, Inc	S	30,325
Seald-Sweet Growers	Y .....	.....	49,500
Select Sires	S	13,500
Sequoia Grove Vineyards	S	5,000
Servos International Trading Co., Inc	S	25,000
Shafer Vineyards	S	2,350
Shallowford Farms	S	15,000
Shelf Stable Foods, Inc	S	80,000
Shurfine International	S	40,848
Sierra Nut Company	S	5,000
Sigco Sun Products, Inc	S	117,500
Simi Winery	L	10,000
Simonian Fruit Co	S	21,000
Simplot Meat Products, Inc	L	20,000
Simply Delicious, Inc	S	25,000
Sinner Bros & Bresnahan	S	15,000
Sioux Honey Association	Y .....	.....	32,235
Sire Power, Inc	S	9,500
Sk Food International	S	17,750
SKIF Corporation	S	65,000
Smith Dairy Product Company	S	75,000
Snapple Beverage Corporation	L	51,000
Snyder's of Hanover, Inc	S	50,000
South Georgia Farms	S	7,329
Southern Pride Catfish	L	20,000
Sovereign Trading Company	S	50,000
Spectrum Naturals Inc	S	20,000
Stahlbush Island Farms	S	10,000
Stanley Orchards Sales, Inc	S	20,000
State Fish Company, Inc	S	10,000
Staton Hills	S	3,000
Ste. Chapelle	S	3,000
Stimson Lane Vineyards	L	74,375
Stinson Seafood Company	S	28,000
Stockpot Soups	S	12,000
Stokes/Ellis Foods	S	20,000
Stonepoint	S	50,000
Stonyfield Yogurt	S	25,000
Stroh Brewery Co	S	51,610
Sturdy Pet Products, Inc	S	10,000
Sun Maid	Y .....	.....	170,648
Sun Pacific Enterprises	L	30,000
Sunday House Foods, Inc	L	7,500
Sungrow	S	39,000

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MAP U.S. COMPANY BUDGETS FOR 1996—Continued

Company	Cooperative	Size	Budgeted
Sunkist Growers	Y		2,568,571
Sunny Ridge Farm		S	22,500
Sunsweet	Y		859,800
Super Stores Industries		S	30,000
Supervalu International		L	15,000
Sutter Home Winery, Inc		S	117,500
Sweet Street Desserts, Inc		S	50,000
Syfo Beverage Company of Flor		S	25,000
SYSCO Food Services		L	5,000
S.B. Global Trading Co		S	80,000
Take 5		S	25,000
Teeccino Caffè, Inc		S	12,000
Texas Best Authentic Food Pro		S	40,000
The California Winery		S	79,500
The Figaro Company, Inc		S	10,000
The Great Western Tortilla Company		S	20,000
The Hain Food Group		S	50,000
Thelams Company		L	68,900
The Original Log Cabin Homes, Ltd		S	175,000
The Seagrams Classic Wine Company		L	125,000
Thompson's Pet Pasta Products		S	183,600
Timber Crest Farms		S	90,000
TKI Foods, Inc		S	200,000
Tootsie Roll Industries, Inc		L	85,000
Tostino Coffee Roasters		S	20,000
Traditional Medicinals Inc		S	106,000
Transcon Trading Co., Inc		S	140,000
Tree Top, Inc	Y		185,000
Triangle Products		S	45,000
Tri-Valley Growers		L	206,000
TRT International		S	50,000
Trundle & Company		S	7,945
Tyson Foods		L	690,000
T&K Pet Products		S	19,000
T. Marzetti Company		L	15,000
United Apple Sales, Inc		S	50,000
United States Bilateral Trade Co		S	25,000
U.S. Distilled Products Co		L	22,101
U.S. Foods & Pharmaceuticals, Inc		S	130,000
U.S. Grain Company		S	30,500
U.S. Mills, Inc		S	14,500
Valley Fig Growers	Y		45,000
Valley View Packing Company		S	40,000
Vanguard Trading Services, Inc		S	100,000
Ventana Vineyards		S	5,000
Vermont Speciality Meats, Inc		S	50,000
Vidalia Supreme		S	20,000
Vie de France Corp		L	30,000
Vienna Sausage Manufacturing Co		S	134,250
Virga's Pizza Crust of VA, Inc		S	10,000
Vision Ostrich International		S	49,500
Vogel Popcorn		L	15,861
Wakefern Food Corporation		S	51,000
Walton & Post, Inc		S	25,000
Washington Beef		L	22,000
Welch Foods Inc., A Cooperative	Y		813,044
Well-Pict, Inc		S	22,000

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MAP U.S. COMPANY BUDGETS FOR 1996—Continued

Company	Cooperative	Size	Budgeted
Wenix International Corp	S	18,000
Wente Bros	S	260,000
Western Export Services, Inc	S	27,000
Western Family Foods, Inc	S	143,000
Wholesome & Hearty Foods, Inc	S	20,000
Widman Popcorn Company	S	26,375
Wild Rice Exchange	S	105,000
Wilkins-Rogers, Inc	S	7,000
Williamette Valley Vineyards	S	4,000
Wilton Foods, Inc	S	25,000
Wine Alliance	L	10,000
Wine World Estates	L	15,000
Wines Of America, Ltd	S	20,000
Wisconsin Enterprise Inc	S	185,000
Wolny & Associates Co	S	40,000
Woltner Estates	S	4,500
World Finer Foods, Inc	S	200,000
World Source Inc	S	10,000
World Variety Produce, Inc	S	7,000
Worldwide Marketing Corporation	S	23,709
Worldwide Sires, Inc	S	44,083
Y S Trading Company	S	20,000
Yorkshire Dried Fruit & Nuts, Inc	S	40,000
Yorkville Cellars	S	5,000
Yoshida Food Products	S	85,000
Young Pecan Company	S	30,000

Question. Please provide any documentation you have regarding actual market gains that are a direct result of this program.

Answer. I will provide that information for the record.

[The information follows:]

[CLERK'S NOTE.—The information referred to does not appear in the hearing record but is available for review in the subcommittee's files.]

Question. Please provide any documentation you have regarding to what extent non-coop companies which received MAP branded program dollars and are of a size which exceeds the small business definition made the decision to market products in a country only because they received the MAP assistance?

Answer. We believe a substantial number of large companies have explored opportunities in new markets as a result of receiving MAP assistance, but we do not have documentation available to this effect because program participants are not required to submit this type of information to FAS. However, program participants are required to certify that any Federal funds received will supplement, but not supplant, any private or third party funds or other contributions to program activities. Program participants must also maintain supporting documentation which demonstrates why the participant is unlikely to carry out activities without Federal financial assistance and make this information available for audit.

SECTION 11 REIMBURSEMENTS

Question. Since USDA is under the cap for section 11 transfers, why are you asking for converting the Emerging Markets Technical Assistance to discretionary sending?

Answer. The basis for proposing the change is that the nature of the activities carried out under the Emerging Markets Program do not relate directly to the primary mission of CCC, which is the stabilization of farm prices and incomes and assisting in the conservation of soil and water resources. Additionally, this proposal is consistent with past actions to discontinue the use of CCC funds for non-commodity price and income support activities, such as ASCS (now FSA) salaries and expenses and funding transferred to FAS to support the General Sales Manager's administrative expenses. Further, by making this change, funding for the Emerging

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Markets Program will no longer be subject to the section 11 transfer limitation and, thus, no longer have to compete for funding against other high priority activities.

Question. Would you please explain in detail the need to move FAS activities from CCC reimbursables to discretionary spending?

Answer. Provisions of the 1996 FAIR Act established a limitation on CCC funding made available each year to other agencies through reimbursable agreements. As a result, a number of priority activities are competing for limited CCC resources. Shifting the Emerging Markets Program and support of the CCC Computer Facility from mandatory to discretionary spending provides for a larger base from which to fund these activities. The 1998 budget does request an increase in funding for FAS which will help to offset a portion of the costs of the activities which will no longer be funded through CCC reimbursement.

Question. Or, do you simply intend to convert these activities to mandatory funds subject to appropriations?

Answer. No, the President's budget ultimately proposes a permanent shift of these activities from the mandatory to the discretionary account.

EXPORT EDUCATION

Question. As part of your effort to enhance export education with potential U.S. exporters on the home front, you mention activities in California, Colorado, Oregon, and Iowa. Are you also utilizing the work of the Global Marketing Support Service at the University of Arkansas?

Answer. FAS recently contacted Dr. Preston Laferney of the University of Arkansas, and we are currently exploring avenues to utilize the Global Marketing Support Service. In addition, FAS is actively working with Arkansas state agricultural officials and the Southern U.S. Trade Association to alert Arkansas companies to overseas trade opportunities and USDA export assistance programs. USDA will continue to enhance export education of potential Arkansas exporters by working with the University of Arkansas and trade related organizations to ensure small, medium and new-to-export Arkansas companies have the tools and information they need to capitalize on the growing export market.

PUBLIC LAW 480

Question. Explain why the reduction in the Public Law 480 program level will have no effect on projected tonnage exported through those programs?

Answer. The proposed \$50 million total rescission in fiscal year 1997 appropriations for Public Law 480 Title I will affect projected tonnages under that program. Commodity shipments will be reduced by approximately 200,000 metric tons as a result of the proposed rescission. However, allocations of Title I commodity assistance that have already been announced for fiscal year 1997 will not be affected by the proposed rescission because the reduction in program funding will be taken from a reserve of unallocated funds and from unobligated funds carried over from fiscal year 1996.

For 1998, while the budget includes a reduction in the Public Law 480 program level, we expect the overall tonnage level for the program to remain unchanged from our revised estimate for 1997 because of lower commodity price projections for next year.

Question. There is a pending rescission request relating to Public Law 480 Title I due to carryover funds and a further reduction in fiscal year 1998. Are the carryover funds not likely to be needed in future years?

Answer. The decision to propose the \$50.0 million Title I rescission was based on the need to identify an offset for the supplemental requests included in the budget, including one for the Special Supplemental Nutrition Program for Women, Infants, and Children. The reduction in program funding will be taken from unallocated fiscal year 1997 funds totaling \$24.6 million and unobligated funds carried over from fiscal year 1996 totaling \$32.9 million. Upon enactment of the rescission, just over \$7 million will remain in the ocean freight differential account for fiscal year 1997. We believe this remaining reserve is needed to meet current programming plans because the rate of ocean freight differential payments has been increasing recently, leading to higher program costs.

Question. Is there not a likelihood that these funds could be transferred to Title II?

Answer. By law, these funds could be transferred to Title II. However, at this time we have no reason to believe that funding will be inadequate for the Title II program this year. Nevertheless, we are monitoring the situation in North Korea and Zaire very closely. Developments in those countries could increase the need for emergency food aid.

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OVERSEAS OPERATIONS

Question. Would allowing for 2-year money for overseas operations provide ultimate savings?

Answer. A key advantage of this proposal is that unobligated balances remaining at the end of a given fiscal year could be applied toward offsetting the following fiscal year's operating costs. This would be particularly true in the event that favorable foreign currency fluctuations associated with overseas office operations created an operating surplus. It is expected that savings in one year would offset losses in others, as a result of currency exchange rate fluctuations.

Question. If so, how much?

Answer. Predicting any savings in advance is not possible.

Question. What other efficiencies would be realized by this move on a programmatic basis?

Answer. This proposal eliminates the uncertainties associated with forecasting overseas wage and prices increases and exchange rate movements, and coupled with the proposed advance appropriation, would ensure that only those funds necessary to offset these costs were actually made available. Currently, accurately forecasting overseas wage and prices adjustments is impossible given the long lead time involved in the budget process. In some fiscal years, more funds were appropriated for these costs than were necessary, in other fiscal years, less.

RICE/EU ISSUES

Question. What steps are USDA taking to help bring consensus within the U.S. rice industry to resolve the TRQ issue with the EU?

Answer. USDA continues to have an ongoing dialogue both with individual companies and with industry associations. At the same time, we are working with EU officials to ensure that, once we come up with a workable system, imports can commence immediately.

CUMULATIVE RECOVERY SYSTEM

Question. What is the status of negotiations with the EU on the rice Cumulative Recover System issue?

Answer. The Commission has drafted proposed regulations for both the 4CRS and the malting barley TRQ. These proposals, both of which are acceptable to U.S. industry, are scheduled to be voted on at the April 17 Grains Management Committee.

QUESTION SUBMITTED BY SENATOR KOHL

DAIRY EXPORT INCENTIVE PROGRAM

Question. Will the Dairy Export Incentive Program (DEIP) be utilized in 1997 to the maximum extent allowed under the Uruguay Round GATT Agreement? If not, why not, and how close will we come to full funding for DEIP in 1997?

Answer. We feel that our current level of activity under DEIP is moving the available dairy products to the international market without causing undue disruption to our domestic markets. We do not project reaching either the quantity or expenditure ceilings allowed under our Uruguay Round commitments for the current year. The volume of activity under the DEIP is a reflection of domestic availability and international demand. With the exception of butterfat, current allocations have been available since July 1996. However, almost 60 percent of our awards have occurred since January 1997. The tight markets in the U.S. last summer and less than aggressive international demand for the products that can be exported under the DEIP were primary reasons for this limited activity. I will provide a table showing the award totals and Uruguay Round ceilings.

[The information follows:]

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DAIRY EXPORT INCENTIVE PROGRAM (DEIP)

[Dollars in thousands]

Commodity	Quantity (MT)—		Bonus value—	
	Committed (from July 1)	GATT maxi- mum (from July 1)	Committed (from Oct 1)	GATT maxi- mum (from Oct 1)
Nonfat dry milk	39,024	100,222	\$30,119	\$113,388
Whole milk powder	1,540	9,971	1,510	11,503
Cheese	1,384	3,669	839	4,999
Butterfat ¹	853	38,611	803	41,934

¹ Includes butter, butteroil, anhydrous milkfat and ghee on a butter equivalent basis.

Note: Commitments are as of April 11, 1997. Quantity commitments are based on a July/June year and expenditure commitments are based on an October/September year.

RISK MANAGEMENT AGENCY

QUESTIONS SUBMITTED BY SENATOR COCHRAN

SALARIES AND EXPENSES

Question. In a climate where other agencies in USDA are decreasing administrative and operating expenses, your projected available funds and staff years for 1998 for the Risk Management Agency and the Federal Crop Insurance Corporation actually increase. Why do you estimate an increased need in funds available and staff years for 1998?

Answer. The requirements of the Federal Crop Insurance Reform Act—the Act—and the Federal Agriculture Improvement and Reform Act of 1996—the 1996 Act—drastically increased the workload required of the Risk Management Agency—RMA—to support FCIC's existing programs, crop expansion, continuing changes to overall program requirements, and the increased emphasis on new crop program development. For example, the implementation of catastrophic risk protection coverage increased the number of policies sold from 800,000 in 1994 to 1.6 million in 1996. In addition, the 1996 Act provided for the establishment of a Risk Management Education program to provide education on risk management strategies, including futures and options trading and insurance protection programs, and to educate producers of the financial risks inherent in the production and marketing of agricultural commodities. The 1996 Act also transferred to RMA responsibility for the Options Pilot Program.

Due to increasing expansion of program coverage resulting from the 1996 Act, the need for greater compliance has grown. Greater reliance on private insurance company delivery based on the Standard Reinsurance Agreement has generated increased Compliance workload in the form of additional Hotline complaints, support investigations, support of regulatory functions of the current insurance program, and upgraded program operations. In addition, the increased reliance of farmers on crop insurance as a result of the 1996 Act has led to much greater demand to expand crop insurance to new crops and new products. Our resources are stretched thin at our current rate of expansion, and we will not be able to accelerate this expansion to the rate demanded without additional resources.

Question. How has the agency conformed to the provision in the 1994 Crop Insurance Reform Act which states, "the Board shall alter program procedures and administrative requirements in order to reduce the administrative and operating costs of approved insurance providers and agents in an amount that corresponds to any reduction in the reimbursement rate required * * * during the 5-year period * * *?" Has the reimbursement rate decreased, and if so, how much?

Answer. Yes, FCIC has decreased the expense reimbursement rate as mandated in the Reform Act. For the 1997 reinsurance year, the rate was decreased from 31 percent to 29 percent. Under current law, the reimbursement rate will decrease at least to 28 percent in 1998 and decrease again in 1999 to 27.5 percent. However, we recognize that the rate may be too high and are proposing that the statutory ceiling on delivery expenses be reduced from 28 percent to 24.5 percent.

RMA also continues to seek ways to simplify the delivery of crop insurance to satisfy this mandate of the Reform Act—reducing administrative expenses. Suggestions were solicited from participating companies and all other interested parties via a

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Federal Register notice. Twenty-nine actions have been completed since passage of the Crop Insurance Reform Act—a few examples follow: actuarial documents have been restructured, which reduced the number of pages printed each year by one-third, or approximately two million; combined forms have been approved which allow the company to reduce the number of times that they must contact the farmer; type and practice codes have been standardized and simplified; and the basic crop insurance computer system called RAS/DAS, was analyzed to assure that it contained no unnecessary or redundant data requirements. Ten actions are still in progress and four more are currently being evaluated. Consultations with industry will continue on this important issue.

Question. The Administration has proposed legislation which will only reduce the amount needed to fund the sales commissions paid to reinsured companies from \$202 to \$150 million. How does the Administration propose to fund the remaining \$150 million?

Answer. The delivery expense of reinsured companies has been paid from the mandatory side of the budget for 1995, 1996 and 1997. For 1998, part of the delivery expenses are to be paid from the discretionary side of the budget as part of a statutory compromise reached in the Federal Crop Insurance Reform Act of 1994. We are proposing that this amount be \$150 million and that it be provided for delivery expenses in general rather than designated specifically for sales commissions. The \$150 million is included in the President's request for funding under the 1998 Appropriations Act.

Question. What will happen under current law to the crop insurance program if the Committee is unable to provide full funding requested for the sales commissions paid to reinsured companies?

Answer. As described above, RMA specifically proposed that the \$150 million be appropriated for expense reimbursement generally, so the companies could determine how to allocate the mandatory and discretionary funds they receive as they see fit. Since the Federal Crop Insurance Act of 1980, delivery of the crop insurance program has been through private companies.

RMA and the Department are committed to the private delivery of crop insurance. We believe in the private delivery system and its ability to broaden the available safety net to farmers. Insurance agents are knowledgeable about the crop insurance products and have made extra efforts to provide producers with access to other lines of insurance and non-insurance risk management tools. We strongly urge that \$150 million be appropriated.

Question. The Administration's fiscal year 1998 request proposes increases in: pay costs for the Office of the Administrator; pay costs and staff years for research and development activities; pay costs and staff years for the insurance services division; pay costs for program support; pay costs and staff years for risk compliance; and, \$202 million for sales commissions paid to reinsured companies.

How does the Administration justify these requested increases for pay costs and staff years when the program is in jeopardy if the \$202 million requested for sales commissions paid to reinsured companies is not funded?

Answer. In our proposal, RMA would be absorbing fifty percent of the combined anticipated pay raise in fiscal year 1998 and the annualization of the fiscal year 1997 pay raise as required by the Department. Therefore, the increase for pay costs for the Agency is only half of what would be needed to fund the pay costs of agency personnel currently on-board working in support of the crop insurance program. Due to the legislation of the past several years, the workload has increased to implement new programs which are of service to the producers, review existing programs and rates/coverages, assure compliance with the policies and from the private insurance companies, and provide risk management education to producers on forward contracting, futures and options trading, and other risk management tools. All of these programs need personnel to produce the desired results expected from Congress and the nation's producers.

Question. The current crop insurance regulations state, "if there are insufficient funds appropriated by the Congress to deliver the crop insurance program, the policy will automatically terminate without liability." Who makes the determination of "insufficient funds" which will trigger this provision?

Answer. Pending the degree to which funds are not fully available, several parties including companies and the Administration must make such a determination. If partial funding is available, the Administration must decide if the program can be delivered in a manner acceptable to farmers and with little confusion or program vulnerabilities. Companies must decide if they can deliver the product adequately and compliant with program standards for the funds reimbursed. Each must make their determination based on the amount of available funds and the timing of when such funds become available. If program funds are not at adequate levels, producers

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could find themselves without insurance after they have made many key management decisions.

Question. Has a determination been made for fiscal year 1998? What is the level of "insufficient funds" which will trigger this provision?

Answer. Such a decision has not been made for fiscal year 1998. The Administration's budget proposal is the only basis at this time upon which to make such a determination, and that proposal results in adequate funding, although some insurance providers may disagree. Until actual funding is made known, estimating levels to trigger the policy provision would only be conjecture.

Question. In your prepared statement, you state that under the Administration's proposal regarding the administrative expenses paid to the reinsured companies that an additional \$10 million in administrative reimbursements to reinsured companies would be required. Please explain why this increase is required and is it netted out of the \$53 million which the budget indicates would be saved by the Administration's legislative proposal?

Answer. Under the current Standard Reinsurance Agreement, FCIC has authorized a higher rate of compensation for expense reimbursement to private insurance companies for increased sales of CRC policies, which is estimated as a \$10 million increase in administrative expense reimbursement. Since we anticipate a 5 percent increase in sales of revenue products and a shift from current yield-based coverage products, we expect that costs to administer the programs will increase.

To offset the increase in these costs in the discretionary portion of RMA's budget, we are proposing the reduction of expense reimbursement rates paid to private insurance companies.

Question. The Administration is proposing legislative changes to reduce the reimbursement rate for delivery expenses, which I understand would lower the discretionary requirement rate from \$203 million to \$150 million. It is also proposing to make a portion of the overall reimbursement rate, not just the sales commission portion, discretionary and subject to appropriations. In your prepared statement you state that in order to be cost neutral in providing revenue insurance nationwide, the reimbursement rate used to determine administrative expenses paid to reinsured companies will be reduced. Is this reduction in the reimbursement rate the same as required by current law over a 5-year period?

Answer. No, under current law, the targeted reimbursement rate for 1998 is 28 percent and for 1999 and beyond, 27.5 percent. The Department's proposal does not specify a particular amount to be paid for sales commissions but reduces the overall reimbursement rate used to determine administrative expenses paid to the private insurance companies. This proposal would lower the reimbursement rate from 28 percent of premiums sold for multiple-peril crop insurance to 24.5 percent in 1998 and 24.25 percent in 1999 and beyond. The proposal specifies that 10.5 percentage points of the proposed rate be considered discretionary spending. This proposal achieves a reduction in discretionary spending of \$53 million from current law to \$150 million for 1998.

Question. How is this proposal to reduce the reimbursement rate connected to the Administration's proposal that will result in an estimated increase of \$10 million for administrative reimbursements to reinsured companies?

Answer. The estimated increase of \$10 million for administrative reimbursements to reinsured companies results from the expected increase in business from nationwide expansion of revenue products. The proposal to reduce the administrative expense reimbursement rate will provide an estimated savings of \$53 million in delivery expenses and is not related to the expansion of revenue products.

EXPANSION OF CROP REVENUE INSURANCE PLAN

Question. In January 1997 the Federal Crop Insurance Corporation Board of Directors approved an expansion of crop revenue coverage on corn and soybeans while adding new programs on spring wheat, grain sorghum, and cotton. (Senator Lugar has been very vocal about the anticipated high costs of expanding this program.) Does USDA have the authority under the Crop Insurance Act to expand the pilot program?

Answer. The Department does have authority to expand CRC on a nationwide basis because it was sponsored by a private insurance company under Section 508(h) of the Act. FCIC does not have authority to offer its own revenue products on a nationwide basis but is requesting an amendment to the FCIC Act which will authorize such.

Question. What is the estimated cost to extend this pilot program nationwide?

Answer. Most of the additional cost is expected due to greater participation induced by products that better meet producers' needs than does the standard yield-

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based coverage. To date, subsidies have been limited to the amount that would be paid if the producer had purchased the Actual Production History—APH—coverage plan. This cost generally is less than the APH plan for IP and RA. For CRC, the cost of the producer premium subsidy is the same as the APH plan, and an average of 9 percent extra is paid for administrative and operating expenses on the portion of the CRC premium that exceeds the premium that would have been paid under the APH plan. In general, the reimbursement to reinsured companies is 6–12 percent greater for CRC policies than for policies sold under the APH plan.

The cost thus depends upon several factors: the increase in total participation and the mix of products that producers purchase. Higher sales of CRC will increase costs; greater market penetration by products such as IP and RA will reduce costs.

For the purpose of the budget, FCIC assumed an increase in total participation on the order of 5 percent. It further assumed that most of the increase would be in CRC. To offset the costs associated with these assumptions, FCIC proposed that the statutory loss ratio target be reduced and made other program modifications. A part of the cost is offset by changes in other mandatory programs. The proposal is budget neutral.

Question. What portion of the \$203 million fiscal year 1998 request for administrative costs is related to this expansion of the pilot program?

Answer. None. The \$203 million estimate in the fiscal year 1998 President's Budget only reflects current law. Current law does not authorize a Federal nationwide revenue insurance program. The additional cost for CRC in 1998 under current law is estimated to be \$10 million.

Question. When does the Agency plan to expand this program and offer it to producers?

Answer. There has been great demand for increased availability of the revenue insurance concept, and the Administration is seeking legislative authority to offer revenue insurance nationwide. Presently, the Federal Crop Insurance Act authorizes only a pilot program of revenue insurance under direct Federal sponsorship. The plan or plans that may be offered are not yet known. Presumably, CRC would be one such plan. However, it probably does not meet the needs of all producers. Thus, some alternative plans may be needed such as Income Protection—IP—or Revenue Assurance—RA.

FCIC has recently received a submission from the private company that developed CRC to expand wheat to 25 additional states and to expand to all counties in states that have previously been approved for only certain counties. FCIC will continue to review and consider for approval, products or product expansions as they are received from the private industry. If approved, consideration will be given to the timing that will allow for the orderly implementation in a way that provides ample opportunity for sales to producers.

Question. What has been the participation rate in this pilot program?

Answer. The Federal Crop Insurance Corporation developed the Income Protection—IP—Plan of Insurance. For the 1996 crop year, IP was available for corn, cotton, and spring wheat in 30 counties. For 1996, about 998 IP policies were purchased, covering about 218,000 net acres with total premiums of about \$3.4 million. For the 1997 crop year the IP pilot program was expanded and is available for corn, cotton, grain sorghum, soybeans, spring wheat, and winter wheat in 159 counties. Data for the 1997 crop year will not be available until late in the calendar year.

Under the authority of the Act, FCIC approved the CRC and Revenue Assurance plans developed by the private sector. For the 1996 crop year, CRC was available for corn and soybeans for all Iowa and Nebraska counties. For 1996, about 91,000 CRC policies were purchased, covering about 11.3 million net acres, with total premiums of about \$141.0 million. For the 1997 crop year, the availability of CRC for corn and soybeans includes all counties in the States of Colorado—corn only, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, Ohio, Oklahoma, South Dakota, and Texas. In addition, for the 1997 crop year, CRC was made available for:

Cotton

Arizona—all counties
Georgia—all counties
Oklahoma—all counties
Texas—selected counties

Grain sorghum

Colorado—all counties
Nebraska—all counties
Oklahoma—all counties

Kansas—selected counties
Missouri—selected counties
South Dakota—selected counties

Spring wheat

Minnesota—all counties
Montana—selected counties
North Dakota—selected counties

Winter wheat

Kansas—all counties

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Michigan—all counties
Nebraska—all counties
South Dakota—all counties

Texas—all counties
Washington—selected counties

FCIC approved the RA plan of insurance for corn and soybeans in all Iowa counties for the 1997 crop year. CRC and RA plans of insurance will only be available in counties if an existing multiple peril crop insurance program is also available for the crop.

Question. As a result of weather, adverse growing conditions, etc., what are the estimated losses as a result of farmers participating in this program?

Answer. As of April 8, 1997, reinsured companies had reported losses of \$47.3 million for Crop Revenue Coverage for corn and soybeans in Iowa and Nebraska. The overall program loss ratio was 0.34. Losses paid to producers of corn and soybeans in Iowa and Nebraska who purchased coverage other than catastrophic under the Actual Production History yield-based plan had been paid \$26.8 million, for a loss ratio of 0.26. By this time, reporting of losses normally is over 95 percent completed.

On that same date, losses of \$55 thousand and \$178 thousand had been reported for corn and wheat, respectively, under the Income Protection coverage plan. The respective loss ratios were 0.07 and 0.13. No losses had been reported for cotton under this revenue insurance plan. Since Income Protection is sold only in specific counties and not entire states, a comparable loss ratio for the APH coverage plan is not readily available.

Question. Some farmers have expressed concern that no “safety net” exists for those that can’t afford crop insurance or that no crop insurance coverage exists for a specific crop. Is there some way to address this concern?

Answer. Free catastrophic insurance coverage—50 percent yield coverage indemnified at 60 percent of the maximum price—is available wherever crop insurance is offered. Producers are responsible for a minor \$50 processing fee for each crop. The fee is waived in instances when limited resource producers cannot afford to pay it. Other alternative programs, such as the Group Risk Plan, provide low cost coverage alternatives in many areas. Where crop insurance is not available for a crop, the Noninsured Assistance Program provides coverage equivalent to catastrophic insurance coverage at no charge when an area suffers a widespread loss.

CROP INSURANCE FOR SPECIALTY CROPS

Question. In the past pilot programs have been directed and pursued for crop insurance alternatives, especially for “specialty crops” in which the standard coverage was not viable. Such policies have been suggested for peaches, pecans, citrus, nursery crops, etc. Which crops are currently participating in a pilot program and what is the status of each of them?

Answer. Specialty crops that are currently participating in a pilot program and their status is as follows:

Apple Scab Integrated Pest Management Pilot Project.—This pilot program was conducted during the 1996 crop year and is currently being evaluated to determine its success. This program provided insurance protection to apple growers participating in an apple scab Integrated Pest Management—IPM—demonstration project. The University of Vermont and the University of New Hampshire jointly conducted the project to demonstrate the effectiveness of IPM procedures for the control of apple scab.

The pilot program provided protection for quality losses due to scab on apples that, had it not been for apple scab damage, would have been marketable as fresh market U.S. Fancy or Extra Fancy apples. The protection against apple scab quality losses required an endorsement to the existing policy since that policy does not protect against quality or production losses due to disease or insects that could have been controlled. Producers desiring this optional coverage were required to carry an available level of additional coverage Actual Production History (APH) insurance coverage on their apples along with the apple scab endorsement.

Support for this IPM demonstration project is consistent with the shared goal of USDA and Congress to facilitate producers’ movement to sustainable farming practices.

Avocados.—An avocado pilot revenue program has been established for the 1998, 1999, and 2000 crop years for Ventura County, California. This program is being tested as an adaptation of the Income Protection program to a specialty crop for which revenue has not previously been insured. Plans are in place to initiate a pilot program to protect against almond revenue losses beginning the 1998 crop year. The almond insurance program has been in place more than fifteen years and provides protection only for production losses.

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Blueberries.—An Actual Production History (APH) based blueberry pilot program was established for the 1995 and 1996 crop years, and expanded for the 1997 and 1998 crop years. The pilot program is presently available in two counties in Maine, two counties in Michigan, eight counties in Mississippi, two counties in New Jersey, and one county in North Carolina.

Canola/Rapeseed.—An Actual Production History (APH) based canola pilot program was established for the 1995 crop year and expanded for the 1997 and 1998 crop years, and is available in sixteen counties.

The pilot program is available for spring-seeded canola in the following counties: Lewis, Idaho; Kittson, and Roseau, Minnesota; Glacier, Montana; Bottineau, Cavalier, Pierce, Ramsey, Rolette and Towner, North Dakota; Whitman, Washington.

The pilot program is available for fall-seeded canola in the following counties: Baker, Calhoun, and Early, Georgia.

The pilot program is available for spring-seeded and fall-seeded high oleic canola and fall-seeded high erucic Rapeseed in the following Pacific Northwest counties: Latah, Idaho; and Umatilla, Oregon.

Florida Fruit Trees.—A Florida fruit tree pilot program was established for the 1996, 1997, and 1998 crop years to protect grove owners for replacement or rehabilitation of trees damaged by freeze, wind, or excess moisture. The insurable tree types include all citrus and the following tropical fruit trees: avocado, carambola, and mango. The pilot program is available in the following five Florida counties: Dade, Highlands, Martin, Palm Beach, and Polk. The insured crops vary by county.

Millet.—A millet pilot program was established for the 1996, 1997, and 1998 crop years for the following five counties: Logan, Colorado; Cheyenne and Deuel Counties, Nebraska; Dickey, North Dakota; and Bennett, South Dakota. Production records, grower interest, and Risk Management Agency Regional Service Office recommendations were used to select the pilot counties. The millet pilot program is an Actual Production History plan of multiple peril crop insurance. A detailed description of these and other pilot programs is available through the Risk Management Agency's Research and Evaluation Division Internet home page at <http://www.act.fdic.usda.gov/research>. This web site also contains feasibility studies and/or executive summaries of feasibility studies conducted to determine the feasibility of developing risk management programs for specific crops, most of which are considered specialty crops.

Question. Have any of these pilot programs been successful?

Answer. The following descriptions of the outcome/status of the pilot programs.

Apple Scab IPM Pilot Program.—Although the Apple Scab IPM Pilot Program evaluation is not completed, the program appears to have served its purpose for the small number of growers who participated. The pilot program evaluation will assess the relative success of the program and its applicability to other areas and crops.

Avocado Pilot Program.—It is too early to determine the success of the avocado pilot program.

Blueberry Pilot Program.—Although the blueberry pilot program evaluation is not completed, it appears that the program has been a success, and plans are in place to convert the program to permanent status beginning the 1999 crop year. About 300 policies reported premium mostly at the CAT (50/60) level. *Canola/Rapeseed Pilot Program.*—Although the canola pilot program evaluation is not completed, it appears that the program has been a success, and plans are in place to convert the program to permanent status beginning the 1999 crop year. Over 2,000 policies reported premium, mostly at the additional coverage levels.

Florida Fruit Tree Pilot Program.—This pilot program is just into the second year of its 3-year expected duration, and the pilot program evaluation is expected to be completed in April 1998. Approximately 1,200 policies were purchased in the 1996 crop year, mostly at the CAT (50/60) level.

Millet Pilot Program.—The millet pilot program is just beginning its second year of its 3-year expected duration, and the millet pilot program evaluation is expected to be completed in July 1998. Approximately 1,700 policies were purchased in the 1996 crop year, mostly at additional coverage levels.

Question. The Federal Crop Insurance Reform Act of 1994 created the position of "Specialty Crops Coordinator." This position was created to serve as a liaison between producers and the agency. Has this position been filled? If yes, then who has been selected to fill this position?

Answer. The Specialty Crops Coordinator position was filled in March 1996 by William C. (Bill) Jones after the previous Specialty Crops Coordinator, Dr. Floyd F. Niernberger, retired in January 1996. Mr. Jones, a native from McLean County, Illinois, began his Federal civilian career with the Federal Crop Insurance Corporation in 1968, and has served in numerous positions within the agency. Although raised on a grain, livestock, and dairy farm in Central Illinois, Mr. Jones has owned and

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operated a small fruit and vegetable farm in the Kansas City area for 15 years, growing, wholesaling, and retailing a variety of specialty crops.

Question. What actions have the agency taken to address the insurance needs of specialty crops?

Answer. The agency has taken a number of actions to address the insurance needs of specialty crops. Major actions that have been taken in addition to developing the pilot programs for specialty crops identified above are as follows.

—The agency published “Data Collection Guidelines to Be Used in Formulating New Crop Insurance Policies” in the Federal Register on April 14, 1995, to advise interested parties of FCIC’s guidelines for data collection to assist the Corporation in researching the feasibility of formulating crop insurance policies for new crops.

—On July 12, 1995, “Notice of Specialty Crops Research Studies” was printed in the Federal Register, naming the specialty crops for which research reports were being prepared and soliciting proposals from interested parties of additional crops or comments on the crops named. Representatives of the agency had speaking engagements with grower groups and commodity associations to communicate the agency’s new and specialty crops program expansion efforts.

—The agency has developed a Summary of New Program Development Data Requirements to be provided to specialty crops growers and commodity associations to enable them to better understand the data needed to develop a new program, and to enable them to assist in the data-gathering process to facilitate expansion efforts.

—The agency contracted research with the Economic Research Service (ERS) to determine the feasibility of insuring various new and specialty crops. These feasibility studies represent one component in the process of developing risk management products for specialty crops. To date, 49 such projects have been undertaken.

—The agency has made available its New Program Development Handbook, Summary of New Program Development Data Requirements, and information regarding various feasibility studies and pilot programs through the agency’s Research and Evaluation Division Internet web site at <http://www.act.fcic.usda.gov/research>.

—In August 1996, the agency’s Research and Evaluation Division conducted an intensive New Program Development Training session for representatives from the ten Risk Management Agency Regional Service Offices and Washington, D.C. The expected outcome of this training was greater involvement in project management at the field level and maximum utilization of resources throughout the agency in the development of new programs.

—The agency is conducting a joint research project between the University of Maine, the Extension Service, and RMA’s Research and Evaluation Division to investigate the feasibility of offering a crop insurance program designed to meet the needs of specialized producers of vegetables and other perishable crops who market through direct marketing channels.

—The agency is expanding the coverage of existing specialty crops programs to new areas and new producers. As an example, the apple insurance program was expanded for the 1996 and 1997 crop years into 16 additional counties in six states. Additionally, written agreements are being accepted for producers of currently-insured crops in counties where the program is not available.

Pilot programs are in various stages of development for the following specialty crops:

Almond Revenue Pilot Program.—A pilot program offering almond revenue protection as an alternative to the current production protection program is being considered for implementation in California.

Pecan Revenue Pilot Program.—A pilot program offering pecan growers protection against unavoidable loss of revenue is being considered for implementation beginning the 1998 crop year.

Sweet Potato Pilot Program.—A pilot program offering growers protection against unavoidable loss of production is being considered for implementation beginning the 1998 crop year in a number of states and counties.

Turfgrass Sod Pilot Program.—A pilot program offering growers protection against unavoidable losses to their sod inventory is being considered for implementation beginning the 1999 crop year. The turfgrass sod industry trade group will be presenting the proposed policy to its membership at their annual meeting in June.

Wild Rice Pilot Program.—A pilot program offering growers protection against unavoidable loss of production is being considered for implementation beginning the 1999 crop year in Minnesota and California.

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Christmas Tree Pilot Program.—A pilot program offering growers protection against unavoidable losses is being considered for implementation beginning the 1999 crop year.

Direct Market Perishable Crops Pilot Program.—A pilot program offering growers protection against unavoidable loss of revenue is being considered for implementation beginning the 1999 crop year.

Aquaculture Pilot Program.—A pilot program offering growers protection against unavoidable losses is being considered for implementation beginning the 1999 crop year.

Peach Income Protection (IP) Pilot Program.—A pilot program offering peach growers protection against unavoidable revenue losses is being considered for implementation beginning the 1999 crop year.

Potato Income Protection (IP) Pilot Program.—A pilot program offering potato growers protection against unavoidable revenue losses is being considered for implementation beginning the 1999 crop year.

Nursery Program.—The current nursery program is being considered for redesign to provide broader protection than is currently available.

Significant pilot program development activity is taking place for the following specialty crops during 1997 and 1998: Cane Berries—Brambles; Melons; Snap Beans—Fresh Market; Squash; Artichokes; Cabbage; Chili Peppers; Citrus Fruit—Alternative to current programs; Cucumbers; and Sesame. This may result in such pilot programs being initiated in the 2000 crop year, depending upon the model used, data and resources available, and other factors.

Question. Are any special initiatives being pursued and what are they?

Answer. Without intending to single out any projects as more significant or of higher priority than the others, the direct market perishable crops program and aquaculture program would probably qualify as much as any others as “special initiatives” in that they probably have the greatest potential to be significantly different from any other programs available or being developed.

QUESTIONS SUBMITTED BY SENATOR BUMPERS

CROP REVENUE COVERAGE

Question. How much would it cost to expand Crop Revenue Coverage (CRC) nationwide in terms of indemnities, reimbursements to private companies, and administrative costs?

Answer. Most of the additional cost expected is due to greater participation induced by products that better meet producers’ needs than does the standard yield-based coverage. To date, subsidies have been limited to the amount that would be paid if the producer had purchased the Actual Production History—APH coverage plan. This cost generally is less than the APH plan for IP and RA. For CRC, the cost of the producer premium subsidy is the same as the APH plan, and an average of 9 percent extra is paid for administrative and operating expenses on the portion of the CRC premium that exceeds the premium that would have been paid under the APH plan. In general, the reimbursement to reinsured companies is 6–12 percent greater for CRC policies than for policies sold under the APH plan.

The cost thus depends upon several factors: the increase in total participation and the mix of products that producers purchase. Higher sales of CRC will increase costs; greater market penetration by products such as IP and RA will reduce costs.

For the purpose of the budget, FCIC assumed an increase in total participation on the order of 5 percent. It further assumed that most of the increase would be in CRC. To offset the costs associated with these assumptions, FCIC proposed that the statutory loss ratio target be reduced and made other program modifications. A part of the costs is offset by changes in other mandatory programs. The proposal is budget neutral.

Question. How do those costs, in addition to the Non-insured Assistance Program (NAP) administered by FSA, compare with the average of ad hoc disaster programs provided over the past ten years?

Answer. As stated above, the cost of expanding CRC depends upon several factors including the increase in total participation and the mix of products that producers purchase. It is impossible at such an early stage of the expansion to make a meaningful comparison between the cost of CRC expansion and the cost of other ad hoc disaster programs and NAP. We can however, provide you with the average cost of disaster payments for fiscal years 1987 through 1996, as provided by the Commodity Credit Corporation, which is \$1,034,082,200. Furthermore, as of April 3, 1997, the cumulative NAP payments for 1996 were \$35,709,127 and \$26,851,144 for 1995.

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Question. Please explain how you plan to make full coverage for CRC revenue-neutral?

Answer. The major additional expense arises from expectations of an increase in overall program participation. The mandatory costs associated with this increase are to be offset by a reduction in the legislated target loss ratio from 1.10 to 1.085 in 1998 and 1.075 to 1.060 beginning in the year 1999. Savings from other mandatory programs also are to be credited. The discretionary costs associated with this increase are to be offset by a reduction in the rate of reimbursement for delivery expenses.

Question. Since the NAP program is designed as a risk management tool, why has it not been consolidated with the other risk management programs of your agency?

Answer. The Department of Agriculture Reorganization Act of 1994 was amended on April 4, 1996, by the Federal Agriculture Improvement and Reform Act of 1996. The 1996 Act required the Secretary to establish an independent agency to supervise the Federal Crop Insurance Corporation activities. The Farm Service Agency (FSA) administers a variety of activities and in the 1996 Act Congress retained NAP functional activities under the administration of FSA. RMA and FSA do coordinate in the collection of yield and price data on NAP crops and that information is helpful when establishing new insurance programs on those previously noninsured crops.

REIMBURSEMENTS TO PRIVATE COMPANIES

Question. On page 12 of Secretary Smith's statement, he mentions a reduction in the discretionary amount for delivery expenses from \$203 million to \$150 million. In the next sentence, he states, "Further, our proposal would make a portion of the overall reimbursement rate discretionary and subject to appropriations whereas current laws treat only the sales commissions portion of the reimbursement as discretionary." Is it not the case that the reimbursement for delivery expenses, the amount you recommend dropping to \$150 million is the only discretionary item relating to company reimbursements. Would you please clarify the statement I have quoted which sounds as though there is a further discretionary item?

Answer. In our proposal, we tried to be fair to the agents and to avoid having to tell the insurance companies how much they would be allowed to pay their agents. As you know, sales commissions have been paid out of the FCIC Fund, which is a mandatory spending account although still subject to appropriation. However, current law requires that they be treated as discretionary spending beginning in 1998.

Our proposal recognizes that the delivery expenses paid, in total not just sales commissions, may have been too high. Consequently, we are proposing that the statutory ceiling on delivery expenses be reduced from 28 percent to 24.5 percent of the premium on multi-peril coverage, which applies to production risks. For revenue insurance, which has a higher premium because it applies to price as well as production risks, the rate will be somewhat less, but the amount will be at least as much as the amount paid on multi-peril coverage. We estimate that delivery expenses under our proposal would be \$417 million, compared to \$460 million under current law, which is a savings of \$43 million, net of about \$10 million in additional cost for an increase in business.

As mentioned earlier, while we wanted to reduce delivery expenses, we did not want agents to have to bear more than a fair share of the reduction. We wanted this to be a matter of negotiation between the agents and their companies, without our getting into the matter. So our proposal provides for eliminating the distinction in current law that subjects only the sales commission portion of delivery expenses to discretionary spending ceilings.

Question. If you reduce the loss ratio used to establish the premium rates structure, what effect will that have on participation? At some point will farmers not feel the cost of the program exceeds the benefits leaving only the more "loss-prone" farmers in the programs?

Answer. RMA is not aware of any studies that reliably estimate the price elasticity of demand for crop insurance. Hence, any assessments about the effect of a change in the statutory loss ratio target can only be conjectural. The proposed reduction in the loss ratio, from 1.10 to 1.085 in 1998 and from 1.075 to 1.060 in 1999, infers a need to increase premium income by 1.4 percent in each year. This is a relatively modest amount that should not impact participation greatly. Annual changes in price elections cause a greater change in premium costs to producers.

The crop insurance program of today offers many options to producers that enable them to better target their risk management strategies with the price they are willing to pay. There are new products and new coverage levels compared to even the

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recent 1995 crop year. There is increasing awareness of the benefits of complementing production risk management strategies with marketing risk management strategies such as puts, calls, forward selling, and others. The environment created by the new farm programs will require producers to actively consider these strategies if they are to be successful.

QUESTION SUBMITTED BY SENATOR HUTCHISON

Question. During the month of March 1997 some areas of Texas have received in excess of 12 inches of rain and today received another 1½ inches. The heavy rains have prevented some Texas farmers from planting crops. At present only about 30 percent of the cotton has been planted and most will have to be replanted. Most of the grain has been planted, however, most will have to be replanted due to flooding and weed infestation as a result of herbicides breakdown.

Is it possible for USDA to extend the final plant date to April 15, 1997 without imposing penalties in the Texas regions where rainfall has been recently excessive? During last year's drought we used creative approaches like this to help Texas farmers and ranchers.

Answer. FCIC has received several inquiries that have recommended that insurance final planting dates be changed so that producers who plant after the final planting date will not receive reduced production guarantees. While such action may appear attractive, it can have negative effects on producers:

- Qualification for a prevented planting production guarantee would be delayed. Producers who are prevented from planting by the final planting date may qualify for a prevented planting production payment. Extension of these dates would require a producer to be prevented from planting until this extended date to qualify. Many growers have indicated that it is not practical to plant after current final planting dates.
- Producers may be compelled to plant until the extended date to qualify for insurance coverage. Planting may continue even in situations in which reduced yields and net returns would be expected. This could result in increased insurance losses and less acreage planted to short-season substitute crops.
- Insurance policy requirements regarding the replanting of a damaged crop could be impacted. Current provisions require that a crop damaged prior to the final planting date be replanted if it is practical to do so. As indicated above, many growers feel that planting past the current final planting date is not practical.
- The late planting period would be extended for most crops until 25 days after the new final planting date. The late planting period would then extend too far into the growing season for most crops.
- Premium rates may be impacted in subsequent crop years if additional losses result from the changes in the final planting date.
- This change would override current policy provisions without regulatory action in the very type of year/conditions for which they were designed.
- RMA received negative feedback after certain date changes were made for the 1995 crop year.
- Insurance providers may seek financial damages—hold harmless—from RMA to compensate for losses that would not have been incurred if planting dates were not changed.

It is for these reasons that RMA intends to maintain current final planting dates and provisions that are expressly designed to deal with situations where planting is delayed or prevented. RMA will continue to evaluate any possible steps that will increase producers' awareness and understanding of these coverages and that will enhance the service that policyholders currently receive, including any options that may expedite payment of indemnities to impacted producers.

SUBCOMMITTEE RECESS

Senator COCHRAN. Thank you all for everything you have been doing. We congratulate you for your good efforts. Thank you very much.

Our hearing is concluded. We will have another in a series of hearings next Tuesday, April 15, at 10 a.m., in this room, 124, of the Dirksen Senate Office Building. At that time, we will consider the budget request for the Department's rural economic and community development activities.

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Until then, the subcommittee stands in recess.
[Whereupon, at 12:05 p.m., Tuesday, April 8, the subcommittee
was recessed, to reconvene at 10:20 a.m., Tuesday, April 15.]

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AGRICULTURE, RURAL DEVELOPMENT, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1998

TUESDAY, APRIL 15, 1997

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:20 a.m., in room SD-124, Dirksen Senate Office Building, Hon. Thad Cochran (chairman) presiding. Present: Senators Cochran, Burns, Bumpers, and Harkin.

DEPARTMENT OF AGRICULTURE

**STATEMENT OF JILL LONG THOMPSON, UNDER SECRETARY, RURAL
DEVELOPMENT**

**ACCOMPANIED BY DENNIS KAPLAN, DEPUTY DIRECTOR, OFFICE OF
BUDGET AND PROGRAM ANALYSIS**

RURAL UTILITIES SERVICE

STATEMENT OF WALLY B. BEYER, ADMINISTRATOR

RURAL HOUSING SERVICE

STATEMENT OF JAN E. SHADBURN, ADMINISTRATOR

RURAL BUSINESS-COOPERATIVE SERVICE

STATEMENT OF DAYTON J. WATKINS, ADMINISTRATOR

ALTERNATIVE AGRICULTURAL RESEARCH AND COMMERCIALIZATION
CORPORATION

STATEMENT OF W. BRUCE CRAIN, EXECUTIVE DIRECTOR

OPENING REMARKS

Senator COCHRAN. The subcommittee will please come to order. We will continue our hearings on the President's budget request for the Department of Agriculture and related agencies for the next fiscal year. We are very pleased this morning to have Under Secretary for Rural Development Jill Long Thompson to lead our panel to review this phase of the budget. With her, we understand, are Wally B. Beyer, Administrator, Rural Utilities Service; Jan E. Shadburn, Administrator, Rural Housing Service; Dayton J. Watkins, Administrator, Rural Business-Cooperative Service; Bruce Crain, Executive Director, Alternative Agricultural Research and

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Commercialization Corporation; and Dennis Kaplan, the Department's Office of Budget and Program Analysis representative.

Thank you all for being here. If I have omitted someone, I am going to ask Secretary Thompson to point that out and introduce others who might be accompanying her this morning.

We have your written testimony, which we appreciate very much. We will make that a part of the record in full, and ask you to make whatever summary comments or remarks you think would be appropriate. We will then have an opportunity to take questions from the subcommittee members.

Before proceeding, though, I am going to ask my colleague, Senator Burns, from Montana, if he has any opening statements or comments he would like to make at this time. Senator Burns.

Senator BURNS. Thank you very much, Mr. Chairman.

We have a very lively microphone. Does anybody ever use this thing? [Laughter.]

We are not going to dwell too much on this. Anyway, Mr. Chairman, I have a statement. We have to get this week started off with a little levity or it is going to be a long week, I fear. So, thank you very much. I will ask if my full statement can be made a part of the record.

I just want to comment this morning that times change and the way we serve our rural communities is changing, too. Mr. Beyer and RUS, we have to start thinking technology and how technologies serve our rural areas and of course the rural utilities programs, distance learning, and telemedicine. I have a great interest in them all because we are moving into a new era with the different ways that we deliver our services and how we plan for rural development, how the infrastructure should look. Broadband communications happens to be a vital part of that. With rural telephones and with the use of wireless, all of this becomes very, very important to rural Montana, just as electricity or anything else is a vital part of that infrastructure that attracts business and industry, aside from our traditional agricultural base to those communities, is vital.

And so I congratulate you for holding these hearings. I am sorry that we do not have some more money to spend in some areas on infrastructure. I think that is the role of Government—to provide that policy and seed money to build infrastructure and then the rest of us can get out of the way and let those that have great imaginations and ideas, let those ideas flow where they serve the majority of the people who are in the business of providing not only food and fiber, but the ability to provide the other services that are found in our rural communities.

And I thank you for this hearing today.

PREPARED STATEMENTS

Senator COCHRAN. Thank you, Senator. We have your written statement and it will be made part of the record along with statements from Senator Bumpers and Senator Byrd.

[The statements follow.]

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PREPARED STATEMENT OF SENATOR BURNS

Thank you Mr. Chairman. I thank you for calling this hearing today. The importance of what is going on in rural America is extremely real to all of us, especially since the majority of this committee comes from rural states. We are touched daily by the questions that our friends and neighbors have about the future of their way of life in rural America. Montana is no different in this respect than is Mississippi or Arkansas.

I have some concerns about what we are planning to do to assist our rural American neighbors. I would love to see the ability to spend more money to spend to assist these people in the development of industries related to their way of life. However, we must do the most with the amounts of money we have available to us.

I have a great interest in the efforts of the Rural Utilities Service to help bring our rural schools and medical facilities into the Information Age. The RUS Distance Learning and Telemedicine Grant Program provided seed money to some of our most successful telemedicine networks in Montana, networks that are still expanding. Rural America continues to face barriers to full access to telecommunications, and one of the best ways to get networks up and running is through grant programs. The grants are relatively small and usually no more than 3 years in duration, but they allow an initial capital investment so the networks can get started. Telecommunications is an important part of rural development and I believe we ought to stay focused on it as we craft this year's bill. This modest investment will bring rural areas dividends in the form of better education, better health care, and more jobs.

I will keep my statement short today to hear from the Department of Agriculture. I thank the Chairman and look forward to hearing from the Under Secretary today.

PREPARED STATEMENT OF SENATOR BUMPERS

Mr. Chairman, again, thank you for your courtesies and let me offer a welcome to today's panel. This hearing will focus on the agencies at USDA charged with the responsibilities for Rural America. My state, with the exception of a few urban areas, is a rural state. Obviously, these agencies are therefore very important to my state. I can not go into any community in any part of my state where the programs administered by the people in this room have not had some direct effect of the lives of the people in those communities.

Growing up in Charleston, Arkansas, I still recall when electricity, running water, and telephone service first came to our home. I know that these are services most Americans take for granted. In truth, there are far more Americans than many would expect that still live day in and day out without these basic services. Without the USDA rural development programs, many hundreds of thousands of Americans every year would still be surviving, somehow, without running water, electricity, or telephones. If America is going to move into the 21st Century as one nation, that means it is up to us to see that all Americans have access to, at least, the basic services of life. The United States of America is not a Third World Country and our people should not be expected to live in conditions as though it is.

Of all the requests that I receive from constituents in my state, none are more compelling, nor might I add more unrelenting, than appeals from rural communities and water districts for funding from the Rural Utilities Service's Water and Wastewater programs. I have seen first hand what a difference these programs can mean for rural communities and I have long considered myself a champion for their cause. My support for these programs is not simply because they are what my constituents want, I honestly believe these programs are among the very best provided anywhere within the federal government. Secretary Thompson, and Mr. Beyer, my congratulations to you for your continuing good work.

By underscoring my support for the Water and Wastewater programs, I don't mean to ignore the other important programs at USDA for Rural America. Adequate housing has been and continues to be a major problem for rural Americans. When one thinks of homelessness, the immediate image is usually one found in an urban setting. But homelessness is not a problem isolated to the inner city, it is found all across our countryside. Equally troubling is the large number of rural Americans who live in totally inadequate housing. USDA's housing programs are designed to make housing affordable, safe, and, in some cases, existent for many families. I continue my support for these programs, but I am a little troubled by an item in the budget request calling on this subcommittee to provide funding for certain section 8 housing assistance costs that have formerly been under the jurisdiction of the VA-HUD subcommittee. With our limited resources, I am concerned that this expansion,

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without a corresponding increase in our 602(b) allocation, will be problematic for existing USDA programs.

To further the need for USDA programs, I would like to focus for a moment on the tragic natural disasters that continue to ravage many parts of our country. For the past several weeks, we have all witnessed the terrible losses in the upper plains states from a combination of massive floods and freezing temperatures. The result has the appearance of convulsive ice flows that have isolated homes and communities. There is certainly a role for USDA Rural Development programs to help these communities and families cope with this disaster.

In addition, last month, deadly tornadoes touched down in several communities in Arkansas. Beyond the grievous loss of life and personal injury, many thousands of Arkansans lost their homes and places of employment. I had hoped that the emergency supplemental request pending before Congress would have included an amount necessary to remedy these programs through agencies such as the Rural Utilities Service, the Rural Housing Administration and the Rural Business and Cooperative Development Service, but I fear the amounts included, where in fact they are included, will fall far short unless there are additional amounts requested by the Administration.

The challenges facing Rural America have always been great. From the days of early settlement, giving rise to the genesis of the American spirit, through the trauma of the Great Depression, to the political disparity resulting from declining populations, Rural America has been at the heart of American perseverance and on the cutting edge of national direction. Today, rapidly changing technologies in communication and information offer Rural America a place at the table of national and global dialogue and achievement. But that place at the table will not occur if we don't ensure Rural America the tools necessary to compete and be a full player in the information age that is upon us. The agencies here today can, and must, play a vital role in making sure that Rural America not only has the basic services necessary for decent living, but also the tools appropriate for the opportunities that lie ahead.

PREPARED STATEMENT OF SENATOR BYRD

Chairman Cochran, Senator Bumpers, members of the subcommittee, and Under Secretary Long Thompson, I am pleased to be here today to review the U.S. Department of Agriculture's (USDA) Rural Development (RD) programs. These programs address one of my long-standing priorities—community infrastructure that meets the basic needs of our citizens. Particularly, the Rural Utilities Service (RUS) programs provide small rural communities with grants and loans for water and waste disposal systems—infrastructure that I deem as a fundamental element of modern civilization.

Incredibly, in these United States, nearly 8 million people do not have access to safe drinking water. Now, let me repeat that, 8 million people in the United States of America, the most prosperous and powerful nation on the face of the Earth, do not have access to a reliable source of clean drinking water. That, in my view, is a national disgrace. National safe drinking water needs are assessed at some \$10 billion. In West Virginia, in 1995, 176,000 families were without an adequate supply of safe drinking water, and the estimated cost of needed water development projects in my state alone is \$568 million.

The USDA's efforts to provide safe drinking water to American families are generally laudable, if underfunded. I have maintained for years that our budget ignores the most basic needs of the people, and that we must take action to restore common sense to our budget priorities. Last year, I offered an amendment that would close corporate loopholes and restore \$65 billion to the federal budget for domestic projects, including funds for water and waste disposal projects. Upon its defeat, I offered another amendment to add \$1.5 billion for federal water and waste water projects. Regrettably, this amendment was defeated as well. Nevertheless, last year, under the capable leadership of Bobby Lewis, the West Virginia Rural Development State Director, the USDA made available \$22.2 million to fund projects that will provide hundreds of West Virginians with access to a reliable source of clean drinking water for the first time. However, much work remains, and this hearing is a welcome opportunity to renew attention to the critical need for federal investment in basic infrastructure. I have several questions regarding the President's proposed budget in this regard.

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STATEMENT OF JILL LONG THOMPSON

Senator COCHRAN. Madam Secretary, you may proceed.

Mrs. THOMPSON. Thank you, Mr. Chairman and members of the committee. I am pleased to be here today to present for your consideration the 1998 budget request for the rural development mission area. And before I discuss the specifics of the budget request, I would like to thank the subcommittee and your staff for the assistance that you have provided to the mission area and to the Department over the past year.

With your assistance and leadership, we were able to enact some of the reforms needed in the multifamily housing program, and then, also, again with your assistance, we were able to conduct a very successful voluntary separation program, which mitigated the need for a large reduction in force. The voluntary separation program has assisted us in meeting other commitments, such as the implementation of the centralized servicing system, and it has permitted us to maintain a staff that is going to be with us for years to come.

This past year has been very rewarding, as the mission area has enjoyed a number of successes beyond delivering the program funds provided by this subcommittee. We began the implementation of the dedicated loan origination servicing system, which will save the taxpayers \$250 million over the first 5 years, and \$100 million annually thereafter. We have also completed the streamlining of a number of our major regulations, single-family housing, business and industry loan guarantees, and water and waste disposal loans. And we, of course, are working on others.

Mr. Chairman, since the early days of this administration, it has been evident that one of the President's highest priorities is to continue and, where possible, strengthen the investment in rural America. While we have seen some improvements in rural areas over the past few years, real household incomes have actually declined, and poverty rates are still alarmingly high.

As you know, the majority of rural poor families are working poor, and incomes are not sufficient to lift families above the poverty level in many cases. The poverty rate in rural America still stands at about 17 percent. And even more disturbing is the fact that 25 percent of rural children under the age of 18 live in families with incomes below the poverty level. And among African-American children, the level is about 54 percent.

Neither the programs of this mission area nor any other Government program can ensure the economic success of any individual, but we can help eliminate some of the obstacles. And empowering people and communities to build the capacity to control their destinies, while partnering with the private sector to build new economic opportunities is a charge that I am very committed to, and is the foundation of this budget request. This budget reflects the President's belief that jobs create opportunity and long-term community stability.

This administration stands behind the principle that if sustainable economic development is to occur, rural communities themselves must develop the structures that enable them to respond to rapidly changing economic conditions and forces in order to become

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competitive and to remain competitive. The communities that are successful are those that take the initiative and have the determination to succeed.

As you know, one of the requirements of the 1996 farm bill is that our State directors in rural development, working in concert with local communities and the States, prepare a plan for the expenditure of the funds appropriated through these programs. Each State office has submitted a draft of their plan, and we are now in the process of reviewing them. And based on my early review of them, I do expect that these plans will very much be like business plans that articulate where a particular State hopes to be 5 or 10 years from now, and sets forth very concrete steps, benchmarks, to get there.

In fact, the benchmarking is one of the more useful tools that comes out of the empowerment zone enterprise community experience. One of our champion communities, an applicant that did not receive designation as an empowerment zone or an enterprise community, did not wait around for the Federal Government to act, and based on the plan they developed, they have now brought in \$100 million in investments without Government assistance.

I very much appreciate the willingness of this subcommittee to appropriate funds under the Rural Housing Assistance Program, the Rural Business Assistance Program, and the Rural Utilities Assistance Program for fiscal year 1997. However, I do remain convinced that the additional flexibility that we requested—the authority to transfer up to 10 percent nationally from one funding stream to another—is a tool that we need to improve the use of the programs as development tools. For that reason, we have again submitted the budget under the terms of the Rural Community Advancement Program, as enacted in the 1996 farm bill.

The budget request for RCAP totals \$2.5 billion in program level, and that translates to a \$689 million level in budget authority. As a former Member of Congress, I fully understand and I share the committee's concerns regarding accountability for sums of money of this magnitude and the ability to track expenditures.

And today I want to assure the committee that I would not approve any transfer until a system has been developed to track the amounts of funding transferred, nor will any transfer be approved unless the administrators of the respective agencies agree to it. We have developed such a tracking system and we can implement it quickly should we be given this authority.

The budget request for the Rural Housing Service, including those programs under RCAP, totals \$921 million in budget authority, which will support a loan and grant program level of \$5.4 billion. Over 60 percent of the budget authority is for the Rental Assistance Program, which, as you know, is the rental subsidy that makes it possible for very low income families to live in the multi-family projects that the Department of Agriculture finances.

The request also includes a transfer from HUD of \$52 million, for us to assume the responsibility for administering the HUD section 8 assistance in some of our housing projects.

For the Rural Utilities Service, including what is requested under RCAP, the total is \$734 million in budget authority, which will support \$3 billion in loans and grants. And over 80 percent of

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the budget authority is to support the water and waste disposal loan and grant programs. The request for these two programs is essentially the same as the subcommittee provided last year. And this level will enable us to continue our commitment to the Water 2000 initiative, as well as meet some of the other increasing demands for these programs.

Probably the most significant change from last year's budget involves the Distance Learning and Telemedicine Program. We are requesting \$21 million in grant funds, compared to the \$7.5 million the subcommittee made available in 1997. And the reason for an increase of this magnitude is quite simple. As Senator Burns very eloquently stated in his remarks, I believe that, in the long term, this program will generate a greater return to the American public and the Federal Government than any other program. And the program is a prime example of why we should view these programs as investments rather than simply expenditures.

The program budget request for the Rural Business-Cooperative Service totals \$70 million in budget authority, and that would support a loan and grant program level of \$780 million. As I have stated earlier, I firmly believe that the private sector is the key to sustainable economic development in rural areas.

And while the private sector has worked very well in most areas, there are some rural communities in which the private sector does not participate as well as they or we would like them to. And as I have also said, I believe the Government's role in these areas should be to encourage the private sector in doing what it does best. Increasing the role of the private sector will enhance our ability to create and maintain jobs in rural America.

The budget request includes \$10 million for AARC. That is an increase of \$3 million over fiscal year 1997. AARC is of critical importance in enhancing private investment in rural areas. As you know, AARC's investments have led to the creation of 5,000 new jobs, all in rural areas, and each one related to value-added agricultural products.

With regard to salaries and expenses, I am very pleased with the progress that rural development has made in meeting our objectives in streamlining and reinvention. And I pledge to you that we will continue to do our share in changing how we conduct business. These changes are long overdue, and had they been made when needed, they probably would not be as costly as they are today.

The improvements we are making, such as DLIS, can only be achieved if up-front investments are made. We have implemented improvements without significant negative consequences on employees, and we thank the subcommittee for helping us to accomplish that.

For salaries and expenses, I have requested \$516 million for fiscal year 1998, which is a reduction from 1997. But I believe it is exactly what we need to continue to administer the programs and to carry out our other responsibilities without having to impose further reductions in force.

Mr. Chairman, before I close, I would like to say that, last year, you questioned our projections regarding the subsidy rate for the single-family housing loans. And at that time, I suggested, in jest, that you were being cynical. And at this point, looking back, I

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would like to say that I very much admire your ability to forecast economic trends; that you were more accurate than I was. And I am hopeful that, as we work toward fiscal year 1998, that what we are requesting will be a more accurate reflection of what the true interest rates are going to be and what the Treasury rates will be.

You were more accurate than I was.

Senator COCHRAN. Thank you.

Mrs. THOMPSON. And I say that as someone who has taken a number of courses in economic forecasting and have studied econometric models and feel that I have a pretty good background. And I think that you were quite accurate last year.

PREPARED STATEMENTS

Senator COCHRAN. Well, thank you, Madam Secretary. And let me say that we have statements from others on the panel which we will also incorporate in our hearing record. But if any of the others have an opening statement, we would be happy to receive their comments at this time.

Mrs. THOMPSON. We would be happy just to submit them for the record, so that we can proceed with your questions.

[The statements follow:]

PREPARED STATEMENT OF JILL LONG THOMPSON

Mr. Chairman and Members of the Committee, I am pleased to be here today and present for your consideration the 1998 Budget request for the Rural Development Mission Area. Before I discuss the specifics of the Budget request, I would like to thank the Subcommittee and your staff for the assistance provided to this mission area and to the Department during the past year. With your assistance and leadership we were able to enact some of the reforms needed in the multi-family housing program and, again with your assistance, we were able to conduct a very successful voluntary separation program which mitigated the need for a large Reduction-in-Force. The voluntary separation program has assisted us in meeting other commitments such as the implementation of the centralized servicing system, and has permitted us to maintain a staff that is going to be with us for years to come.

Mr. Chairman, this past year has been very rewarding as the mission area has enjoyed a number of successes beyond delivering the program funds provided by this Subcommittee. We began the implementation of the Dedicated Loan Origination and Servicing System (DLOS) which will save the taxpayers \$250 million over the first five years and \$100 million annually, thereafter. Implementation is still in the early stages, but we see no reason that we cannot meet our projected completion date of October 1, 1997. DLOS is one of the largest government reinvention efforts undertaken, and the monetary savings is only one part of the success. We have proven that we can successfully manage large scale change, and we have proven that change does not necessarily lead to negative consequences for our employees.

We have also completed the streamlining of a number of our major regulations: single-family housing, business and industry loan guarantees, and water and waste disposal loans, and we are working on others. Our objective has been not just to streamline, but also to produce a product that works better and costs less. These regulations are not only smaller in volume—they are much more understandable and customer friendly. Further, in order to make the business and industry loan guarantee program more attractive to lending institutions, the application forms will soon be available electronically, and they can be forwarded to our offices electronically. We are now examining other opportunities to use this application process.

FOCUS OF THE 1998 BUDGET

Mr. Chairman, since the early days of this Administration it has been evident that one of the President's highest priorities is to continue, and where possible strengthen, the investment in rural America.

While we have seen some improvement in rural areas over the past few years, real household incomes have actually declined and poverty rates are still alarmingly high. The majority of rural families are working poor. Incomes are not sufficient to

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lift families above the poverty level in many cases. The poverty rate in rural America still stands at about 17 percent. Even more disturbing, however, is the fact that 25 percent of rural children under the age of 18 live in families with incomes below the poverty level, and among African American children, the level is about 54 percent. As the President said in his State of the Union address, our economic future is with these children, and their Education and training will be the cornerstone of tomorrow's economy. However, many of these children may not have the opportunity to obtain the necessary education because they still lack basic amenities of life such as adequate shelter and running water in their homes. Investment in the elimination of these problems must continue, and we must view them as investments, rather than simply expenditures.

EMPOWERMENT AND PARTNERSHIPS

Neither the programs of this mission area nor any other Government program can ensure the economic success of any individual, but we can help eliminate some of the obstacles. Empowering people and communities to build the capacity to control their destinies while partnering with the private sector to build new economic opportunities is a charge that I am very committed to and is the foundation of this budget request. This budget reflects the President's belief that jobs create opportunity and long-term community stability. We recognize that it is primarily the responsibility of the private sector to create the needed jobs. However, in many rural areas, the private sector alone cannot accomplish the task. These are the areas where we need to focus our efforts and help the residents and the private sector create opportunity.

This Administration stands behind the principle that if sustainable economic development is to occur, rural communities themselves must develop the structures that enable them to respond to rapidly changing economic conditions and forces in order to become competitive and to remain competitive. The communities that are successful are those that take the initiative and have the determination to succeed.

There has been some improvement in rural areas, but examining the data closely reveals that most of the improvement occurs in those counties adjacent to metropolitan areas. According to one report, over 400 rural counties have fewer jobs today than in 1969. These counties are generally found in the northern plains, the agriculture heartland, the Mississippi Delta, the Cotton Belt, and natural resource dependent states. The growth that has occurred in rural areas tends to be concentrated in slow growth or declining industries—and in the more rural counties that have experienced growth, it tends to be in low-skill, low-wage jobs. This type of growth does not provide a base for self-sustaining economic development.

For sustainable development to occur, rural communities must either attract more of the high skill industrial employment or increase the number of higher income residents and the only means of accomplishing this is to increase investment that improves the communities' ability to compete in an increasingly global economy. Depending on their individual circumstances, this investment ranges from basic infrastructure improvements and housing to business and industrial investment. And we in the Federal government who administer programs that assist rural areas must be willing to work with the communities, and the States, to ensure that the investments are tied to long-term strategic improvements. As you know, one of the requirements of the 1996 Farm Bill is that our State Directors, working in concert with local communities and the States, prepare a plan for the expenditure of the funds appropriated through these programs. Each State Office has submitted a draft of their plan and we are now in the process of reviewing them. I expect these plans to be like business plans that articulate where a particular State hopes to be 5 or 10 years from now and sets forth very concrete steps (bench marks) to get there. Bench marking is one of the more useful tools to come out of the Empowerment Zones/Enterprise Communities (EZ/EC) experience. One of our "Champion Communities", an applicant that did not receive designation as an EZ/EC, did not wait around for the Federal government to act. Based on the plan they developed they have now brought in \$100 million in investments without government assistance. This is the ability and determination that we hope to create in all of our customers.

RURAL COMMUNITY ADVANCEMENT PROGRAM (RCAP)

I very much appreciate the willingness of this Subcommittee to appropriate funds under the Rural Housing Assistance Program, the Rural Business Assistance Program, and the Rural Utilities Assistance Program for fiscal year 1997. However, I remain convinced that the additional flexibility that we requested, the authority to transfer up to 10 percent nationally from one funding stream to another, is a tool that we need to improve the use of the programs as development tools. For that rea-

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son we have again submitted the budget under the terms of the Rural Community Advancement Program (RCAP) as enacted in the 1996 Farm Bill.

I strongly believe that the key to economic growth in rural areas is the private sector, particularly the investment community. In most rural areas the private sector works quite effectively and efficiently. However, in other areas it does not work as well and when investment capital flows out of rural areas the local capacity to foster economic development declines, as does the incentive to invest in these areas. Inevitably, the Congress and the Administration are faced with public policy choices regarding these problems. What we collectively have done over the past few decades is enact new programs to meet some of the needs. The programs we administer today are a result of that process and while they individually have been very successful in eliminating or mitigating specific problems, they have not been used collectively to address the economic structural problems that plague many of our rural areas. What the Administration proposed, and what the Congress enacted in the 1996 Farm Bill, was the philosophy of better using what resources we now have rather than creating new programs which stood little chance of being funded due to budget constraints. If the problem is investment capital, we should focus our efforts not on new programs, but rather on how we can encourage the private sector by expanding secondary markets, making existing programs easier to use, working with community bankers to increase their ability to package loans, sharing risk with other institutions, and creating more partnerships with the private sector. This philosophy should also apply to infrastructure investments. At every opportunity we are involving other lenders and other sources of funds in our projects to stretch our limited resources. We can and we will do more of this. But, what we need is the flexibility to bring the key players to the table and structure a financial package that is good for the community, is a sound investment for the local lender, and reduces the involvement of the Federal government. Neither the Federal government, local or state governments, nor the private sector can solve these problems alone. We have to work together. The Federal government has to be more flexible in its approach to solving these problems, and, in my opinion, the flexibility outlined in RCAP is the most important part of the legislation.

The budget request for RCAP totals \$2.5 billion in program level and \$689 million in budget authority. As a former Member of Congress, I fully understand and share the Committee's concerns regarding accountability for sums of money of this magnitude and the ability to track expenditures. I assure the Committee that I would not approve any transfer until a system has been developed to track the amounts of funding transferred, nor will any transfer be approved unless the Administrators of the respective Agencies agree to it. We have developed such a tracking system and can implement it quickly, should we be given the authority requested.

RURAL HOUSING SERVICE

The budget request for the Rural Housing Service, including those programs under RCAP, totals \$921 million in budget authority which will support a loan and grant program level of \$5.4 billion. Over 60 percent of the budget authority is for the rental assistance program which, as you know, is the rental subsidy that makes it possible for very low-income families to live in the multi-family projects that USDA finances. The request also includes a transfer from HUD of \$52 million for us to assume the responsibility for administering the HUD section 8 assistance in some of our housing projects. The Administration has adjusted USDA and HUD budget ceilings to reflect this transfer of responsibility. The request also includes \$4 billion for single-family housing loans, \$1 billion of which is for direct loans. Loans, loan guarantees and grants for community facilities total \$428 million with a subsidy cost of \$27.6 million. As you know, the funds are used to finance a wide variety of community facilities ranging from hospitals and health clinics to sidewalks and drainage improvements, with over 50 percent of the money being utilized for either health facilities or fire and rescue equipment.

Mr. Chairman, during the past few decades this country has made great strides in reducing the number of Americans living in inadequate housing and much of the credit for this success lies with this Subcommittee. Unfortunately, there is still a large number of rural Americans living in inadequate housing and, despite the desire of each one of us to balance the budget, the simple fact is that housing poor families costs money. And as we deliberate this budget request we must keep in mind that this housing is more than shelter from the elements—it is more than providing short-term jobs in the housing industry and increasing the local tax base of the community. Being a homeowner increases the dignity of these families immeasurably—it provides an environment for the children to gain more from their education. I would strongly encourage each Member of the Subcommittee to visit one

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of our mutual and self-help housing sites, visit with the families that have built their own homes with a little help from the Federal government, and experience what being a homeowner means to these families. Programs such as the mutual and self-help program should be among the highest priorities of this government because it gives people the opportunity to lift themselves out of their existing conditions. I think a quote from a recent article in the Los Angeles Times puts the proper perspective not only on the self-help program, but all of our programs. The statement is made by a gentleman in Mississippi, who with his family, recently moved into a new home that he and neighbors constructed through the program. He "imagines the children having a clean place to study and himself awakening after a good nights rest where you don't have to worry about catching rain in pots and pans".

RURAL UTILITIES SERVICE

The request for the Rural Utilities Service programs, including those requested under RCAP, totals \$734 million in budget authority which will support \$3.0 billion in loans and grants. Over 80 percent of the budget authority is to support the water and waste disposal loan and grant programs. The request for these two programs is essentially the same as the subcommittee provided last year and this level will enable us to continue our commitment to the Water 2000 Initiative as well as meet some of the other increasing demand for these programs. We presently have a backlog of applications for water and waste disposal loans and grants totaling over \$4 billion, and this represents but a fraction of the funding that will be required to meet water quality and drinking water standards in rural areas. We will be increasing our efforts to attract other funding for these projects in order to stretch our limited resources.

The most significant change from last year's budget involves the distance learning and telemedicine program. We are requesting \$21 million in grant funds compared to the \$7.5 million the Subcommittee made available for 1997. The reason for an increase of this magnitude is quite simple. I firmly believe this program will, in the long-term, generate a greater return to the American public and the Federal government than any other program, and the program is a prime example of why we should view these programs as investments rather than simply expenditures. This is part of the President's emphasis on education. This program will ensure that rural students have access to the same educational opportunities available in suburban and urban schools, and improves the prospect that more of the students will remain in rural areas because they will no longer have to migrate to urban areas for better jobs. This technology means that the information business is no longer dependent on being close to urban centers.

Not only does the distance learning program provide the enhanced educational opportunities to rural students that will enable them to compete in the job market and the universities with urban students, but it provides those students from poverty stricken families the educational tools that may change their lives. They no longer have to face a future of very limited opportunity or perhaps be doomed to a future of public assistance. These are the faces that light up the most when provided access to this technology. They are the ones that realize this access can help them break out of the poverty cycle that affects too many rural areas in this country. Secretary Glickman and I had the fortune to visit the schools in the Mississippi Empowerment Zone and see first hand what this technology means to these students. And I might add that this effort is supported not only by the Federal government. The private sector has been working hand-in-hand with us. In this particular school system we were able to place a number of Federal surplus personal computers, many which we and others repaired and upgraded. A private firm from Indiana donated 40,000 feet of cable initially, and has agreed subsequently to donate an additional 3.5 million feet, while Federal employees and employees of the local telephone company volunteered the labor to wire the schools so the students could have access to the information Superhighway.

Mr. Chairman, none of the success we will see from the distance learning/telemedicine program would have been possible without the rural electric and telecommunications programs. The positive economic effects these two programs have had on rural America cannot be measured. I say this to reiterate the point that rural America cannot attract the businesses or industry it needs to strengthen local economies without making investments in infrastructure. Mr. Chairman, we are requesting \$34 million in budget authority to support a total program level of \$1.5 billion for electric and telecommunication loans.

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RURAL BUSINESS-COOPERATIVE SERVICE

The program budget request for the Rural Business-Cooperative Service totals \$70 million in budget authority—this will support a loan and grant program level of \$780 million. As I have stated earlier, I firmly believe that the private sector is the key to sustainable economic development in rural areas, and while the private sector has worked very well in most areas, there are some rural areas in which the private sector does not participate as well as they or we would like for them to. And as I have also said, I believe the Government's role in these areas should be to encourage and assist the private sector in doing what it does best. Increasing the role of the private sector will enhance our ability to create and maintain jobs in rural America.

We have taken several steps to make the business and industry loan guarantee program easier for private lenders to use and we have also included incentives for the lenders to participate in areas in which they are now not very active, such as the Empowerment Zones/Enterprise Communities. For example, we are willing to increase the level of guarantee from 80 percent to 90 percent and decrease the guarantee fee from two to one percent on loans made in the targeted areas. The application will soon be available electronically, and the lenders will be able to submit the applications electronically. All of these changes should increase the participation and efficiency in the program.

Mr. Chairman, with the decline of the traditional farm programs which provided stability in the farm markets, I firmly believe that cooperative-owned farm businesses offer an opportunity to pool risk, increase marketing power, and provide the stability no longer available through the price support programs. We see cooperatives as part of the safety net for farmers. In addition, I think we will see more cooperative processing businesses to maximize the amount of money returning to the farmer and remaining in the rural communities. We will soon be submitting legislation to the authorizing committees to authorize the delivery of assistance to non-agricultural cooperatives. There is an increasing interest in rural areas to use the cooperative form of business to deliver other services such as health care, child care and housing. At present we are prohibited from providing such assistance unless the primary sponsor is an agricultural cooperative. This legislation, if enacted, will provide another important tool in our rural development efforts and I think we will see more use of our business programs by cooperative ventures. As I said earlier in this statement, it is important that local investment capital remain in the local community—this is the foundation that makes sustainable development possible. Once the investment capital starts to migrate to other areas a declining spiral in the economy begins and it is very difficult to reverse.

ALTERNATIVE AGRICULTURAL RESEARCH AND COMMERCIALIZATION CORPORATION

Mr. Chairman, the budget request includes \$10 million for AARC, an increase of \$3 million. AARC is of critical importance in enhancing private investment in rural areas. AARC's investments have led to the creation of 5,000 new jobs, all in rural areas and each one related to value-added agricultural products. AARC equity investments are part of the safety net for farmers, providing that vital link between the development of new products based on agricultural commodities and successful commercialization that is now even more critical with the gradual phase out of commodity support payments.

SALARIES AND EXPENSES

Mr. Chairman, I am very pleased with the progress that Rural Development has made in meeting our objectives in streamlining and reinventions and I pledge to you that we will continue to do our share in changing how we conduct business. These changes are long overdue and had they been made when needed, they probably would not be as costly as they are today. The improvements we are making, such as DLOS, can only be achieved only if up-front investments are made. We have implemented improvements without significant negative consequences on employees, and we thank the Subcommittee for helping us accomplish that. Mr. Chairman, for Salaries and Expenses I have requested \$516 million. This is a reduction from 1997 and is exactly what we need to continue to administer the programs and carry out our other responsibilities without having to impose further Reductions-in-Force. The level appropriated for 1997 presented some management challenges, but through planning and moving some items planned for 1997 back into 1996 and delaying other plans and reducing other headquarters expenditures, we have been able to work within the level provided and maintain our commitment not to reduce administrative support of the State Offices.

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Seventy four percent of our request is composed of salary costs. We cannot continue to absorb costs without further reductions-in-force, and we cannot afford to reduce the staff further than we have planned without jeopardizing the delivery of programs. We will have reduced the staff by over 2,000 positions since 1993 and we have closed just under 400 offices. At the same time, our costs have increased automatically through inflation and annual cost of living adjustments and further reductions in salaries and expenses will necessitate reductions-in-force and that will negate much of the progress we have made.

Thank you very much for the opportunity to discuss the budget request for rural development. The Administrators and I will be happy to respond to any questions you may have.

PREPARED STATEMENT OF WALLY BEYER

Mr. Chairman and Members of the Subcommittee, I am pleased to accompany Under Secretary Jill Long Thompson and present the 1998 Budget and Program Proposals for the Rural Utilities Service. I want to thank the Subcommittee for the support you are providing to rural America. Investment in infrastructure continues to be an investment in our Nation's future productivity and equality of economic opportunity. Congress has always recognized that it is in our national interest for all citizens, and all regions, to have equal opportunity to build, to grow and to develop to our greatest potential. The latest example was the passage of the Telecommunications Act of 1996, when Congress and the President declared that it was in our national interest to ensure that reliable, affordable, telecommunications be available to rural citizens as well as major population centers.

The character of this Nation is rooted in rural America. We began as an agrarian society and our rural experience still affects our lives. Geographically we are rural. Rural America comprises 80 percent of the Nation's landmass. With nationhood comes responsibility, and the investment we as a people and as a government have made in the infrastructure of rural America has benefited all Americans. This investment has increased economic productivity, improved health care and education and created a modern agriculture that is a part of the global economy. Living in the Great Plains most of my life, I know firsthand the benefits of our rural electric, telecommunications and water programs. The opportunity that the government has "helped to ensure" throughout the years will be just as important tomorrow as it was 60 years ago.

The rural infrastructure programs are the foundation of rural education, health and economic development. Without a strong foundation, rural America will not be able to build on its strengths and aid the country as we move into this increasingly competitive global economy.

RUS is the Federal government's point agency for rural infrastructure assistance. RUS infrastructure programs focus on targeting scarce Federal resources into high cost areas, poverty areas, low density and out-migration areas and servicing the unserved. Priority is given to leveraging scarce Federal dollars. The 1998 budget proposes \$34 million in budget authority for the electric and telecommunications infrastructure loan programs. This \$34 million budget authority will generate \$1.5 billion in Federal loans with an additional leveraging of \$4.33 billion private capital for a total anticipated 1998 capital investment of \$5.8 billion in the rural electric and telecommunications infrastructure. This relatively small Federal dollar investment in rural infrastructure is a critical catalyst for the much needed private, state, and local capital used to maintain quality reliable infrastructure in rural America at reasonable cost. Each Federal loan dollar in the RUS telecommunications program leverages 4.5 private capital dollars. Each Federal loan dollar in the RUS electric program leverages 3.0 private capital dollars.

WATER AND WASTE DISPOSAL PROGRAMS

It is hard to imagine, but in this modern era we still have rural areas with families that are drinking unsafe water and families without plumbing and wastewater facilities. These are pressing but solvable public health concerns. Towns and communities of less than 10,000 people often lack the tax base and bonding authority to construct, update, or repair water and waste disposal infrastructure systems.

Drinking water and waste disposal infrastructure is basic and vital to both health and economic development. The Water and Waste Disposal Program administered by RUS invests loans and grants to bring safe drinking water and sanitary, environmentally sound waste disposal facilities to rural Americans in greatest need. If economic growth is going to occur in an area, adequate water and waste disposal facilities are a necessity. The challenges presented by investing in safe and clean water

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for rural areas and small communities are sometimes daunting, but our achievements are among our most rewarding.

The programs make sound investments in rural citizens and small communities, improving the lives and public health standards of rural Americans in all 50 states. Sanitary and environmentally sound water and waste disposal facilities are key to protecting against serious, often life threatening illnesses related to water contamination, such as crypto sporidium,¹ giardia, gastroenteritis, cholera, typhoid, and salmonella.

The RUS loan and grant programs will provide safe, affordable drinking water to an estimated 782,000 rural households and an estimated 2.2 million people in 1998. This program consistently has far more requests for funds than funds available. At the end of 1996, states had on-hand loan and grant applications totaling \$4.1 billion. State Rural Development Directors have for several years done an outstanding job of mixing grants, loans, state and non-USDA funds to leverage and finance the highest priority projects. Based on the Administration's belief and policy that low income and poverty areas represent the greatest need, water and waste disposal investments are targeted to those areas.

Water 2000 initiative

In the RUS' state-by-state assessment in 1995, we found that an estimated 2.5 million rural Americans, including some one million people who do not have water piped into their homes, have critical needs for safe, dependable drinking water. Approximately 5.6 million more were found to have additional serious needs under Safe Drinking Water Act standards. Water 2000 is an initiative to clearly assess those needs and to target the loan and grant investments to address them. State Rural Development offices have completed the Needs Assessment which shows at least \$3.5 billion in critical rural safe drinking water investment needs, and another \$6.5 billion in additional serious needs.

A good example of the value of this initiative is a project just funded to allow the City of Campton, Kentucky, to expand its current public water system to rural homes that now rely on spring, creek and well water.

Located in Wolf County in the Appalachian region of Kentucky, the local economy is limited to small farms, small timber operations, and small coal mines. The median household income in Wolfe County is approximately \$11,000, less than half the state average of \$22,232. The County has water sample records from the supplies of more than 100 people living in the proposed service area and the majority of the tested samples are highly contaminated with fecal coliform and/or confluent growth and some have detected the presence of dangerous E. Coli bacteria. By expanding the service area of the community, an additional 370 users will have a safe, dependable source of good drinking water.

Water 2000 special allocation

In 1996, Congress provided us with \$36 million (budget authority) in unspent funds from the special supplemental nutrition program for Women, Infants and Children (WIC), to be used for safe and clean water projects. In July 1996, we converted these funds into \$59 million in Water and Wastewater loans and grants, which we supplemented with \$11 million in loans and grants from regular State allocations, and used to implement a total of \$70 million 54 targeted safe drinking water projects in 35 states. These projects, once all completed, will result in improved drinking water quality, quantity and dependability for an estimated 145,122 people, including some 18,200 receiving public water in their homes for the first time.

In 1995 and 1996, RUS invested a combined total of \$547 million in loans and grants in projects that meet the guidelines of Water 2000, which place a priority on serving unserved or under served households.

Water and waste disposal budget

The budget requests a total of \$1.2 billion Water and Waste loans and grants. The program mixes loans and grants, according to the needs of the community or system, in order to provide water and waste disposal at an affordable rate. Under the RCAP program, the budget request is for a 1998 program level for Water and Waste Disposal loans of \$809 million with a budget authority of \$72 million and Water and Waste Disposal Grants and \$484 million in grants.

¹ Crypto sporidium killed more than 100 people in Milwaukee, Wisconsin, in April 1993, and seriously sickened thousands more.

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TELECOMMUNICATIONS

Technological advances in the telecommunications industry will mean new tools to increase opportunities for rural America. The Information Superhighway will help rural America survive, prosper, and compete. It brings the entire world to the door of our rural citizens. Whether enabling regional communication or finding new markets throughout the world, access to the Information Superhighway is vital to the future of rural America.

The RUS Telecommunications program provides a cost-effective means for assisting rural telecommunications providers in building the infrastructure for the Information Superhighway in rural America. The program provides capital, establishes telecommunications standards, and provides policy guidance for rural telecommunications in the National Information Infrastructure initiative. This service is needed more than ever with the passage of the Telecommunications Act of 1996 (Telecommunications Act). Significant investment in rural infrastructure will be required to meet the promise of the Telecommunications Act and the maintenance, expansion, and improvement of the rural infrastructure.

The RUS Telecommunications Program continues to provide leadership in this changing environment. Just as we engaged in the development of the Telecommunications Act, we have been deeply involved in working with the FCC, the Federal-State Joint Board and State Public Utilities Commissions to create an acceptable universal service structure. To share ideas about the importance of telecommunications in people's lives, RUS held six satellite accessible rural telecommunications forums around the country bringing together Federal and State policy makers with rural Americans to discuss issues and exchange ideas.

Telecommunications Program Budget

The 1998 Budget requests \$300 million for treasury rate loans, \$120 million in guarantee of direct FFB financed loans, and \$40 million for 5 percent hardship loans. These program loans are financed with a total budget authority of \$1.6 million. RUS has requested budget authority in a single amount for telecommunications programs. If the Administrator has the flexibility to move budget authority between the Telecommunications programs, it will better enable the Agency to meet the needs of borrowers and the citizens of rural America who are the end users of these vital services.

Distance Learning and Telemedicine Program

The Distance Learning and Telemedicine Loan and Grant Program has emerged as one of the most dynamic new programs in the rural development area. For the past four years grants have been made to rural organizations to buy end-user equipment to encourage, improve, and make affordable telecommunications access to educational and health care services. The demand for the distance learning and telemedicine grants has been high. For the four fiscal years from 1993 through 1996, RUS has received 896 applications seeking a total of \$277 million. Due to budget constraints, only \$35 million was available. This money funded 119 projects in 39 states and one territory, leveraged more than 66 million in non-federal dollars. In 1997, under our new authority, we will make our first loans.

Through 4 years of the grant program activity, approximately 704 rural schools in 33 states, serving nearly 600,000 rural students, will be able to utilize the Information Superhighway to share limited teaching resources and to gain access to libraries, training centers, vocational schools, and other institutions located in metropolitan areas. For telemedicine, approximately 500 rural medical facilities in 23 states and one territory, serving more than two million rural residents, will be able to provide improved health care through linkage with other rural hospitals and major urban medical centers for clinical interactive video consultation, distance training of rural health care providers, management and transport of patient information, and access to medical expertise or library resources. This amazing leveraging of resources is a testament to the creative nature of our rural citizens.

Distance Learning and Telemedicine Loan Program

The Federal Agriculture Improvement Act of 1996 (1996 Farm Bill) added a loan component to the RUS Distance Learning and Telemedicine Program. For its first year, 1997, the loan component has been funded at a program loan level of \$150 million. This loan component will help to meet the extraordinary demand from rural schools, libraries, community centers and health care providers to purchase end-user equipment. The new loan component will also allow third parties to guarantee the repayment of, or to borrow funds on behalf of, rural schools, community centers, or libraries that either cannot incur long-term debt or need a little extra help.

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This increase in program level for end-user equipment will fit hand-in-glove with the discount in the Telecommunications Act of 1996 for transmission costs for schools, libraries and rural health care providers. Community centers can also use the equipment for welfare to work programs.

To bring it all together, we are in the process of revising the regulations to integrate the loan component into the program.

Distance learning and telemedicine grant and loan budget

The Budget requests \$21 million for grants in 1998. This is triple the current grant program, a \$13.5 million increase over the 1997 appropriation. For the new loan program, the Budget requests a program level of \$150 million.

Rural Telephone Bank

Congress created the Rural Telephone Bank (RTB) to address the increasing need for capital to develop rural telecommunications services. Over the life of the program, the RTB has lent more than \$3.2 billion to rural telecommunications borrowers to help build, maintain, and upgrade the rural telecommunications infrastructure.

Pursuant to statute, the RTB began the process of privatization during fiscal year 1996, when the Board of Directors voted to retire \$18 million of government held stock. Also during 1996, we completed a study on how accelerated privatization of the RTB would impact the RTB's ability to obtain capital in the private markets. The study concluded that the RTB could accelerate the maximum statutory privatization period and be in good shape to borrow money in the private markets by the end of 1998.

The RTB is in a strong financial position with more than \$1 billion in net worth. By the end of fiscal year 1998, the RTB will have sufficient internally generated funds to fully retire the government's remaining \$574 million capitalization of the RTB. The Administration is working on legislation which would allow a fully private RTB to leverage its net worth in the private markets and free the RTB from the restrictive lending purposes of the RUS program—allowing more capital for investment in the new rural telecommunications market structure.

Rural Telephone Bank budget

The 1998 budget request is for \$3.7 million in budget authority, to support a program level of \$175 million in loans.

ELECTRIC PROGRAM

The Electric Program represents one of the most effective public/private partnerships in the history of our Nation. The Electric Program seeks to ensure universal electric service at affordable rates. It serves as a cost-effective means for the leveraging of capital for the maintenance of a nationwide network of infrastructure. The investment is a continuing success story.

Today, the Nation's electric industry is changing dramatically. It is moving from a monopoly-based to a competitive structure. Already, to a great extent, the wholesale power industry has been deregulated. Several states are already introducing competition at the retail level, and legislatures in another dozen states are actively considering like proposals. The 105th Congress will debate a national restructuring this year.

As the debate on electric utility restructuring and deregulation develops, the RUS believes there are two goals that should be part of the development of any restructuring of the marketplace. The first goal is to ensure the continued availability of reliable, high quality electric service at a reasonable cost to rural consumers. The second goal is to protect the integrity of the government's loan portfolio.

To accomplish these goals, the RUS believes that any restructuring of the electric utility industry should be guided by the principles of reliability, fairness and flexibility. The transition to a more competitive industry environment must maintain the reliability of the Nation's electric system. A more competitive electric sector with retail choice should be fair and equitable to all consumers—including rural citizens, to existing electric utilities, and to Federal taxpayers who support the RUS program. Finally, industry restructuring should be flexible and contain a thoughtful transition process that accommodates the diversity of the electric utility industry, state regulatory structures and policies, and a process of educating consumers about the changes.

To help address the changing nature of the industry, the RUS is reforming itself. We have made the first reform of our mortgage and loan security documents in 25 years. Working with the Office of General Counsel (OGC), we have instituted an automated loan processing system, a computerization of our loan and security docu-

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ment preparation that in the telecommunications program has reduced the time involved from up to 6 months to a turn around of 10 days. We have streamlined our regulations and processes to maximize borrower flexibility. The new regulations and procedures enhance a borrower's ability to attract private financing while at the same time making internal changes to compete more effectively. New merger regulations encourage borrowers to take advantage of the economies of scale. The RUS continues to review our programs and procedures to allow for a more efficient program that is customer friendly while protecting the taxpayer investment in a modern rural infrastructure.

RUS' Rural Electric Program is the primary mechanism that helps to provide universal service to those areas that are the highest cost to serve. The program helps service approximately 25 million rural Americans living on 80 percent of the land mass, areas that investor-owned and municipally-owned utilities failed to serve. Rural electric cooperatives own 2.2 million miles of line, serving an average of 5.5 customers per mile. This compares to an average of 35 customers per mile of line that other providers serve. Unlike the telecommunications industry, where over the years, many mechanisms have been created to offset the high cost to serve rural areas, in the electric industry, the RUS program is the only mechanism to address the high cost to serve. The ongoing cost to serve must be supported and aging and obsolete infrastructure must be replaced and improved.

As the electric utility industry undergoes restructuring and deregulation, RUS electric borrowers will face greater competition and uncertainty. This is particularly true of generation and transmission borrowers who, in the late 1970's and early 1980's made large investments in nuclear generation at a time of high inflation and high interest rates.

Since President Clinton appointed me as Administrator of RUS, working with the very able and competent RUS staff, I have made every effort to work through these problems. Where necessary, this has included working with the Department of Justice to resolve serious debt situations. There is no doubt that it would be easier to sit back and take no action. However, we have an obligation to manage the RUS loan portfolio, and to that end will continue to aggressively seek solutions that result in maximizing recovery of Federal loan funds.

Electric program budget

For 1998, the President's Budget requests \$400 million loans for municipal rate electric loans, a \$125 million for 5 percent hardship loans, \$300 million for guarantee of direct FFB financed loans. The 1998 budget request reflects no change from the loan level of \$825 million available in 1997. These program loans are financed with a total budget authority of \$29 million. As in the telecommunications program, RUS is requesting budget authority in a single amount for maximum flexibility in using funds for programs with the most need.

CONCLUSION

The Rural Utilities Service has had the opportunity to be at the vortex of change in two of the Nation's most important industries—electricity and telecommunications. Each of these industries generate revenue of approximately \$200 billion a year and both are evolving from a regulated monopoly to a competitive environment. Each of these industries define who we are as a nation and how we move forward into a global economy.

Rural America is challenged by distance, density and economies of scale. The facts focus the issue—rural America, 80 percent of the landmass and 20 percent of the population. Serving rural America simply costs more per person than serving urban and suburban America and therefore, the market creates an access, quality and affordability disparity between rural and urban and suburban areas. This disparity is the rationale for the concept of universal service.

A concept which holds that all Americans are part of our nation and all Americans are entitled to the opportunity to make the most of their natural abilities and the opportunity to join with each other, as a nation, in our relationship with the rest of the world.

It is this issue—universal service, coupled with universal opportunity, and ultimately what kind of country we are—which defines the issue of rural infrastructure.

The Congress debated the universal service issue last year in the Telecommunications Act of 1996. In that debate we asked how does a new competitive environment affect universal service? Will serving rural residents still cost more than serving urban and suburban residents? How do we make service affordable for rural residents? How will it affect rural America? The answer was clear—universal service must be preserved and strengthened. Rural America must not be left behind. Rural areas should be supported by the system as a whole.

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The question of funding rural infrastructure through the Rural Utilities Service asks the same basic question—the question of universal service. And the answer is the same as in the Telecommunications Act of 1996. Universal service support is part of who we are as a nation. The access to capital, standards, affordability equalization, and lending leadership is needed more than ever. As we move from a monopoly to a competitive market place, and as that transition takes place, the need is much greater, not less, than ever.

PREPARED STATEMENT OF JAN E. SHADBURN

Mr. Chairman and members of the Committee, thank you for this opportunity to testify today on the President's fiscal year 1998 budget proposal and the accomplishments and goals of the Rural Housing Service.

The Rural Housing Service, succeeding the Farmers Home Administration, provides opportunities to rural families which help them improve their standard of living, move out of poverty and build for the future. We enable rural communities to enhance the quality of life of their residents and to strengthen their economic competitiveness. We accomplish this mission by providing rural people and communities with: access to credit—which, as you know, is often limited in rural areas; subsidized loans and rents; and technical assistance and support to complete their community development efforts.

The Rural Housing Service operates several housing assistance programs that provide decent, safe and affordable rental and home ownership opportunities to a wide variety of Rural Americans. RHS also administers the community facilities direct and guaranteed loan and grant programs which provide funding for essential facilities such as health care centers, fire stations, municipal buildings and day care centers. These facilities allow rural communities to provide an improved quality of life for their citizens and remain competitive in attracting jobs and businesses. We deliver these programs and the necessary technical assistance through a network of state and local offices, many of which are or will be collocated with other USDA agencies in USDA Service Centers.

Too many times we talk about the number of housing units, the square footage or the payment with the associated subsidy cost. We lose touch with the final product in the blur of our daily work—that product is a chance at the American dream for thousands of poor working families. That product is the result of the efforts of this Congress and USDA, which gave an opportunity to a family or a community. The investment has paid off thousands of times, both for the individuals and communities and for the federal government. The rewards continue to grow.

While we have provided this assistance for many years, we now also focus on four goals: Reinventing government; developing a range of partnerships and leveraging opportunities; creating budget savings for the taxpayers; and expanding access to our programs across rural America.

I would like to update you on our efforts on these four goals and our modifications to the Section 515 Rural Rental Housing Program, but first I would like to share with you the impact of housing and community facilities programs on the broader range of issues which concern this Congress. These issues include moving individuals from welfare to work, containing health care costs, providing an adequate start to children to improve their opportunities in life and improving the competitiveness and stability of the rural American economy.

Although the Rural Housing Service finances the physical construction or rehabilitation of housing and community facilities, the impact on the community and the individual goes far beyond the tens of thousands of construction and related jobs, the millions of dollars generated each year in building and associated trades, the more than \$1 billion boost in state and local taxes and the actual physical shelter provided. Our assistance literally allows individuals, families and communities to turn their lives around and to start to become self sufficient. Let me just give you a few examples.

Some of the worst housing in the country is experienced by farmworkers. The horrendous housing conditions that some of these workers endure cause so many other problems, particularly for the children. I would like to share with you how one family near Madera, California credits RHS' farm labor program with providing them the opportunity to have a decent life and a future.

Three years ago, a young farmworker and his family were sharing a substandard, one-bedroom house with another family. The father worked very hard in the fields, but the high cost of child care prevented the mother from finding a job. It seemed that the children in this family had dim prospects of a better life than that of their parents—that is, until the family was able to move into the RHS-funded la Casa

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de la Vina farm labor housing complex, located adjacent to the grape fields which the father helps to cultivate. The eldest child attends a nearby elementary school and the middle child attends the Head Start program located in the la Vina development. These children have stability, a decent home, and good educational opportunities, all of which seemed out of reach just three years ago. And the mother now feels sufficiently secure about her children's safety and her housing that she has started to work in a local produce-packing plant. This is just one example of the thousands of hardworking, low-income American families whose housing conditions—and therefore quality of life—have dramatically improved through participation in the RHS Section 514/516 Farm Labor Loan and Grant Program.

I would also like to tell you about what a difference in people's lives our Mutual Self Help Housing Program has made. This program, in conjunction with our Section 502 Direct Loan Program, allows groups of six to ten families to build homes for themselves by contributing sweat equity. Each family works on every other family's house until every house is done. Only then may the families move into their new homes. The process lasts about a year, and it's easy to see how by the end, the families have built not only their homes but also a tight community. Billy and Debra Blackmon offer a compelling example of how these programs have brought prosperity and a sense of togetherness to the people in one rural Florida town. In 1986, Mr. Blackmon was working hard at his \$6 an hour job, but he never seemed to get ahead. Today, he is a certified electrician with his own successful business, and he credits his participation in the Self Help Program with enabling him to achieve that goal. Mr. Blackmon is giving back some of the opportunity the government gave him: today he hires young men from the local area to work in his business. He teaches them electrical skills and he mentors them, encouraging them to complete their education and to participate in society. Some of his employees who were considering dropping out of school are now on the honor roll. Mrs. Blackmon is giving back as well: she started her own day care program, thereby raising the income of her family and providing quality, affordable day care to her neighbors, who in turn are now able to return to work. As you can see, in the process of moving themselves out of poverty, the Blackmons have become community leaders and role models. Just ten years ago, they were living in a one-bedroom structure that got soaked every time it rained. Now, they and their children live in a lovely home they built with their own hands. Thanks to the Self Help Housing Program, their kids have opportunities that were unimaginable a decade ago, and their community is turning around.

As you are aware, the effort to move families off of welfare and into work requires the availability of affordable quality day care, which is often more limited in rural America. This can present a real barrier to a family who is trying to move out of poverty. RHS' community facilities programs can be used to finance both adult and child day care and RHS is working hard to ensure that communities can utilize this resource. I would like to share with you how RHS' financing of the "Time for Tots" child care facility in Harlan, Iowa, has impacted so many residents' lives and supports your efforts to move families from welfare to work.

"Time for Tots", financed by a direct community facility loan, opened in 1993 with a license to care for 113 children. According to Nancy Gessmann, general manager of Communications Data Service, Time for Tots benefits her business because "... workers are more dependable and absenteeism is reduced by as much as 50 percent." Harlan resident Mary Marco stated that "my entire life has blossomed as a result of Time for Tots." Ms. Marco, a single working mother of four, always struggled to provide her children with a safe and stable day care environment. But before Time for Tots, there was no affordable day care in Harlan, and Ms. Marco had no alternative but to move her children from sitter to sitter and relative to relative. And still she sometimes had to stay home from work to look after them. Of course, Ms. Marco's absenteeism prevented her from moving ahead in her job. She worried that she would have to go on welfare to make ends meet. But after Ms. Marco enrolled her three youngest daughters in Time for Tots, her income stabilized, and with a loan from our agency, she was able to move her family from a rented, two-bedroom apartment into her own three-bedroom home. Because of Time for Tots, Marco and her children have a better future. They and other Harlan families are able to stay off welfare, and Time for Tots' affordable, high quality child care has given many families the resources they need to move from welfare to work.

Rural America has seen tremendous progress from these investments. As a result, many of these communities are more competitive and stable, additionally many more families are contributing to the local tax base. Child care facilities and self help housing communities are pulled together by grass roots efforts of the local people. Children are healthier, doing better in school, gaining self esteem by having the pride of showing a friend where they live. This is the real story. However, we must

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recognize the task still to be done. Rural areas continue to have high poverty rates and over 2.3 million substandard homes. Many communities lack the essential community facilities such as child care centers, fire stations and access to health care that not only impact the quality of life but also make it more difficult to attract and retain businesses. And we cannot expect a community or a family to become self sufficient if the economy is not thriving. However, we also cannot expect a family to be able to hold down a job and stay off of welfare if they do not have a decent and stable place to live. A permanent address and a decent place to live provide the stability that a worker needs to obtain and maintain a job and that a child needs to be successful at school.

Over the last two years, we have outlined our reinvention and partnership efforts to this committee. I would like to review those efforts and lay out our plans for the future to help achieve our four goals: reinvention, partnerships and leveraging opportunities, budget savings and expanding access.

Let me first discuss reinvention. As rural America changes, so does the Rural Housing Service. Our reinvention efforts in the Single Family 502 Direct Loan Program, under the leadership of the Vice President's National Performance Review, are a great success and have set the standard for future efforts. We recognize that as we work together to balance the budget, we must use automation and modern technology to increase our efficiency, improve our customer service and cut costs.

The reinvention of the Section 502 Single Family Direct Loan Program includes three components:

- The reduction of regulations by over 90 percent from 290 pages to 30 in the Code of Federal Regulations and the production of a user friendly handbook for our field staff and partners.
- The reduction in the cost of the program by over 30 percent, reducing the subsidy rate by squeezing out excess costs. As you know, this change was accomplished in fiscal year 1996.
- The implementation of the Dedicated Loan Origination and Servicing (DLOS) System, strongly supported by this committee. The DLOS initiative includes two components—the automation of our loan origination and servicing functions, and the establishment of the Centralized Servicing Center (CSC) in St. Louis to service an \$18 billion portfolio of almost 600,000 borrowers. The DLOS Initiative will allow us to satisfy the Congressional mandate to escrow for taxes and insurance.

The Agency purchased a commercial off-the-shelf software system directly from the private sector with modifications to meet unique program requirements. Our borrowers will experience the best of both worlds by receiving the finest servicing the private industry has to offer today while still participating in Congressionally mandated "supervised credit" services delivered locally by our field staff. These services, unique to the 502 program, offer lower payments based on income (payment assistance), moratoriums and work-out agreements which allow our borrowers to preserve their homes through economic or financial difficulties. The automation and centralization efficiencies, the reduction in staff and the improved servicing of the portfolio will result in a savings to the taxpayer of \$250 million over five years (1996–2000) and \$100 million a year thereafter.

The Administration laid out a plan three years ago which stated that we would complete conversion to a centralized system by the end of fiscal year 1997. On October 25, 1996, Secretary Glickman traveled to St. Louis, Missouri, to kick off the Centralized Servicing Center, to announce that this goal has been achieved and to present Vice President Gore's Hammer Award to the staff who have worked on this initiative. We are proud of our staff and our efforts. This is truly a reinvention of our business. The conversion of the portfolio is proceeding in seven phases and will be completed on schedule by September 1997.

This year, we continue to build on our reinvention efforts by focusing on our Multifamily Housing Program. We are streamlining regulations and increasing automation. We hope to create a dramatically reduced, common-sense, non-bureaucratic set of regulations that eases the burden on our borrowers and our staff. We are confident that the result will be better administration of our programs and protection of our aging portfolio.

We are also working hard to maximize our use of technology. For example, we are now posting those community facilities direct loans that are eligible for refinancing with private sector credit on the Internet so that private financial institutions can discuss refinancing opportunities with these borrowers.

I would also like to share with you our efforts to increase and build partnerships and leveraging opportunities which expand our limited resources, ensure that as many dollars as possible are directed into rural communities, and build private,

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nonprofit and other public sector participation in local rural development efforts, increasing their likelihood of success.

The goal of the President's National Partnership for Home Ownership is to provide home ownership to an additional eight million Americans by the year 2000. In support of the President's Initiative, we have increased our efforts to cultivate partnerships throughout the states. Three of these new partnerships have been especially successful, and I will tell you about them now.

First, we formed the Rural Home Loan Partnership in June of 1996. RHS joined the Rural Local Initiatives Support Corporation (Rural LISC) and the Federal Home Loan Bank System to create and deliver a new single family mortgage product to enable families below 80 percent of area median income to achieve home ownership. RHS provides a fixed-rate, subsidized mortgage to cover a portion of the cost of a house, while a local bank provides financing for the remaining portion. Private nonprofit community development corporations (CDC's) identify and counsel eligible borrowers and aid in the development of affordable housing opportunities. This counseling is often critical to the long term success of the homeowner. This partnership brings a new player—The Federal Home Loan Banks—into leveraging with the 502 direct loan program. RHS' partnership with the community development corporations helps direct resources to very needy areas, leverages technical assistance and builds a long lasting partnership to accomplish other rural development initiatives. This product was demonstrated in nine states, and eight new partnerships are being formed this year. The states involved in this partnership include Alabama, California, Florida, Kentucky, Louisiana, Maine, Maryland, Michigan, Minnesota, Mississippi, Nebraska, New York, Ohio, Pennsylvania, Texas, Washington, and Wisconsin.

Second, RHS is also partnering to ensure home ownership education is available in rural America. RHS is working with Fannie Mae, Freddie Mac, the Housing Assistance Council and Rural LISC to help build a rural network and support for home ownership education which typically involves a series of classes to instruct potential homeowners on credit, budgeting, savings, home maintenance and the basic ABC's of owning a home. Numerous indicators have shown that home ownership education reduces delinquencies and increases the long term success of the borrower. However, as with so many other support services and assistance, rural residents are often at a disadvantage in accessing these resources.

In addition to these new initiatives, one of our most successful partnerships, the Mutual Self Help program, also supports the President's home ownership goals. The Self Help program provides grants to nonprofit organizations and municipalities to organize and provide technical assistance to groups of families who work cooperatively together to help build their own homes. The sweat equity built up by the borrowers means these families—and the federal government—can get more house for less debt. The families are able to achieve the American dream of home ownership and start out with significant equity and greater commitment to their neighborhoods. Activity and interest in this program has increased tremendously in the last few years. In turning around borrowers' lives, the Self Help program brings together not only the contributions of the borrowers but also those of federal, state, local, private, and nonprofit organizations, all of which are committed to the goal of making home ownership a reality for low-income Americans.

RHS' loan guarantee programs have brought increased numbers of financial institutions into partnership with the Agency. Over 1,600 partners now participate in the Section 502 guarantee loan program. This program serves low and moderate-income residents that fall under 80 percent of the median income. Additionally, in fiscal year 1996, the agency implemented a demonstration of the Section 538 multifamily guarantee program. We plan to approve approximately \$13 million in new loans for fiscal year 1997.

In the Section 502 direct program, we have encouraged leveraging, which utilizes our direct loan funds in partnership with another lender's funds. We take the second lien on the property, with the private sector lender or housing finance agency in first position. The states have been creative in establishing a wide variety of partners across the country. In fiscal year 1996 we leveraged almost 15 percent of our low-income 502 funds to increase home ownership opportunities to almost 1,600 families who would not have been served without this effort.

In the 515 multifamily housing program, we increasingly employ partnerships with state housing finance agencies, CDBG and HOME funds, the private sector and local community organizations. This has allowed RHS to reach larger numbers of low-income tenants with limited budget authority.

In the community facilities programs, RHS has leveraged over 50 percent of its funds, with state, local and private partners. RHS is developing a new partnership with HHS and Rural LISC (Local Initiatives Support Corporation) to expand the

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number of child care centers in rural America and demonstrate a variety of financing models.

RHS' third goal is to ensure access to our programs by all eligible residents and communities across rural America. Under Secretary Glickman's leadership, the Rural Housing Service is continuing its outreach to underserved communities and populations and its efforts to comply with both the letter and spirit of the civil rights and fair housing laws. Let me give you a few examples of our activities in this arena.

Native Americans are among the poorest housed groups in America and mortgage financing has not been widely available on Tribal lands. In 1995, USDA and HUD jointly conducted a series of home ownership conferences to enhance opportunities for lending on Native American lands. One result of these conferences is a comprehensive guide for Rural Development staff called "Lending on Native American Lands." In addition, RHS is working closely with Fannie Mae and several Tribal councils to better serve Native Americans' housing needs. Fannie Mae has agreed to a pilot program in which Fannie Mae will purchase RHS guaranteed loans made on tribal lands.

RHS has also improved the quality of life on tribal lands by expanding the use of the Community Facilities programs by Native American communities. For example, using a combination \$825,000 direct community facility loan and a \$675,000 guaranteed community facility loan, the Navajo Nation and the Foundation for Hospital Improvements were able to improve the medical compound at Ganado by building a new surgical wing, replacing the obsolete natural gas service line, making necessary repairs, and building housing for medical personnel.

RHS has worked hard to ensure that all of our borrowers and staff follow the Fair Housing Laws. We incorporated a significant Fair Housing training component at all national housing training meetings last year. We are finalizing a Memorandum of Understanding with HUD on how to manage Fair Housing complaints. We have also significantly improved our annual Congressional Report on Fair Housing and RHS Beneficiaries by using more meaningful indicators of our progress.

RHS has been promoting outreach activities to historically underserved customers. This activity includes home ownership among women by participating in the Home Ownership Opportunities for Women (HOW) partnership, one of 58 national partners in the President's Home Ownership Initiative. HOW is undertaking an initiative to bring national home ownership rates for women to the same level as those for men.

Doing more with Less: RHS has accomplished a great deal in reinventing government, in creating and expanding partnerships and in expanding access to our programs, and we have also made a significant commitment to help balance the budget. In fiscal year 1996, RHS cut the cost of the single family direct housing loan program by over 30 percent. Our Centralized Servicing and DLOS Initiative is saving the taxpayers \$250 million dollars over five years (1996-2000). RHS has proposed a legislative change to the Section 515 program. This change will reduce the subsidy rate by approximately 8 percent. Even though there is a significant demand across rural America, we have held our request for rental assistance constant, increasing it only to take on the added responsibility of converting some rural area Section 8 units to USDA rental units. Finally, RHS' Servicing Initiative has reaped tremendous savings for the government. Our single family housing delinquency has fallen by over 3 percent from fiscal year 1996 and is at the lowest rate in over twenty years.

Finally, I would like to provide an update on our Section 515 Direct Multi-family Rental Housing Program. The Section 515 rural rental housing loan program is a vital program that provides decent and affordable housing to families, disabled and elderly individuals whose annual income averages about \$7,300 dollars. No other federal program reaches into remote rural areas to provide affordable, safe and decent rental housing. We have made great strides in strengthening our management and oversight responsibilities in our Section 515 program. We have made over 100 administrative changes to improve performance and reduce fraud, waste and abuse. Changes include the establishment of a loan classification system which will enable us to improve our management and monitoring of the portfolio and reduce costs by improving the focus of our servicing. In addition, we have continued over the last four years to strengthen our debarment activities against developers and management companies which have abused the program.

These management improvements complement the reforms to the Section 515 program initiated by the Committee and passed by Congress in the 1997 Appropriations Act. The Department has worked diligently since the law was enacted to expedite the implementation of these reforms. RHS has worked extensively with stakeholders representing for-profit and non-profit developers as well as housing advocacy

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groups, state housing finance agencies and other interested parties to develop the regulation.

We believe we have a regulation which is workable and meets the intent of the law. The regulation is now in final clearance, and the Department is planning to publish an Interim Final Rule in the Federal Register on March 31, 1997 to implement these legislative reforms. As a result of the Congress' and the Administration's efforts to improve the 515 program, we have a healthier and safer portfolio today. The tenants' and government's interest are protected.

Before we provide the specifics of the budget request, let me reiterate the importance of RHS' housing and community facilities programs in creating strong rural economies and enabling rural families and individuals to have a decent quality of life and a fair shot at the American dream.

Now I would like to highlight the following points from the 1998 Budget proposal.

For section 502 direct single family housing loans in 1998, we are requesting a loan level of \$1 billion. This is the same level as was authorized in the 1997 Appropriation Act. However, after the Act was signed into law interest rates were higher than projected so \$83 million in budget authority only supported \$585 million in loans. The budget authority increase from \$83 million to \$128 million is necessary to maintain a \$1 billion loan level for fiscal year 1998. For the Section 502 guaranteed loans, we are requesting a loan level of \$3 billion. This level is \$300 million more the 1997 level but only costs \$690,000 more in budget authority over fiscal year 1997.

We have also proposed legislation to permit the use of Federal guarantees to help graduate current direct loan borrowers to private credit. The Rural Housing Service is aggressively encouraging our direct Section 502 borrowers to "graduate" to private sector credit, particularly in this low interest rate environment. However, many of the borrowers do not have sufficient equity to graduate and qualify for conventional credit. Further, they are statutorily prohibited from graduating to our guaranteed program. The President's 1998 Budget requests an authorization of a \$100 million for graduating direct loan borrowers into the guaranteed program, at an appropriated subsidy cost of only \$20,000. The Department will also submit a legislative proposal to remove the statutory prohibition.

In the section 515 multi-family housing loans, a loan level of \$150 million is requested for 1998. The loan level request for housing repair loans (Section 504) is \$30 million. For domestic farm labor housing loans we are requesting \$15 million. These and the two smaller loan programs for housing site development are requested at about their current 1997 levels.

The budget authority appropriation requested for the housing loan programs is \$225 million, about \$34 million higher than in the 1997 appropriation.

An increase of \$16.8 million to \$540.9 million is requested for rural rental assistance in 1998. In addition, RHS is requesting an increase of \$52 million to assume HUD's expiring Section 8 contracts in RHS financed projects. These contracts, which service Section 515 developments, can be more economically managed in the Section 521 Rental Assistance program, creating savings for the taxpayer.

The housing grant programs are being requested for 1998 under the Rural Housing Assistance Grants Program. Within this program, our requests include \$10 million for farm labor grants, \$24.9 million for housing repair grants, \$26 million for mutual and self-help housing grants, and \$10 for housing preservation grants. The supervisory and technical assistance grant program and the compensation for construction defects grant program will continue to operate in 1998 with small amounts of carry-over funds which will be available.

The community facility program request is included in the proposed Rural Community Advancement Program. Within that overall program, we project that \$209 million will be available for direct community facility loans and that another \$209 million will be available in the guaranteed loan program. About \$9 million is proposed for community facility grants. The appropriation requested within RCAP to support the community facility programs is \$28 million for 1998. This is \$9 million more than is available for 1997.

For administrative expenses, the Budget requests \$413.6 million. This is a \$13.3 million reduction from 1997 which reflects the centralization of single-family housing loan servicing.

PREPARED STATEMENT OF DAYTON J. WATKINS

Mr. Chairman and members of the Committee, I am pleased to present the Administration's fiscal year 1998 budget for the Rural Business-Cooperative Service (RBS).

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Rural Business-Cooperative Service is a component of the Rural Development Mission Area and has made significant contributions to enhance the lives of rural Americans. Like our counterparts, we share the belief that a strong rural America requires an investment in people, education, technology, health care, infrastructure, and social and community affairs. These investments will enable rural Americans to continue advancing in the economic mainstream of this great nation and help them build sustainable rural communities. RBS significant contribution to this effort has been in our ability to make our resources available to rural Americans. These resources build partnerships within these communities which leverage public, private, and non profit resources to stimulate economic growth. New jobs paying higher wages will be created and they will maintain the current ones. It means positioning rural residents to be able to meet the needs of their individual families for basic necessities. This can be accomplished by allowing rural residents to have income to pay for educational expenses of their children, family's housing needs, and to enhance their personal pride and self-esteem. It also means being able to meet the credit and financing needs of rural business owners who are unable to find them from other sources. It means helping the new entrepreneurs implement their dream of owning and operating their own businesses. Besides helping agricultural producers analyze alternative business forms, like cooperatives, which may offer them greater economic opportunities than currently offered by the marketplace in this highly competitive environment. Each of these efforts will touch rural America. Our responsibility is to provide efficient access to our programs so that rural Americans can maximize the benefits that will result.

At Rural Business-Cooperative Services, we strive to enhance the quality of life for all rural Americans by assisting rural business owners and new entrepreneurs to develop businesses that are sustainable and provide a product or service which consumers demand. We assist these businesses in providing employment for local residents, owners and their families. We help them identify new opportunities and markets for their goods and services. These commitments help improve the performance of rural businesses consistent with efforts to reduce the size of the Federal government and balance the Federal budget. Even in this environment we must still provide efficient services to rural residents. One of our objectives is to use this opportunity to be creative in developing new concepts and approaches to serve our customers. To ensure that rural Americans continue to have access to our programs and services, we are developing new and exciting initiatives. These initiatives will focus more resources on individuals, businesses, and communities that have not traditionally participated in our programs. By doing this, we can be instrumental in increasing the contribution made to the overall growth of rural America by putting under utilized resources to better use. This is consistent with the overall goals and objectives of the Rural Development mission area.

To meet our goals, objectives, and the growing demand for our services and resources, our strategy is to increase strategic alliances through creative partnerships with other Federal Departments, other agencies of USDA, corporate America, educational institutions, nonprofit organizations and others. Together, we can leverage resources to maximize their availability to rural America. Through strategic alliances, we can serve more people and communities because more organizations are available to serve them. Let me highlight an example of a completed strategic alliance and others currently in the developmental stages.

- Signed a Memorandum of Understanding (MOU) with the United States Army to assist with the Armament Retooling and Manufacturing Support (ARMS) Initiative. This initiative will use the ammunition manufacturing facilities on closed military bases as a catalyst for community economic development and business opportunities. Our role is to utilize our staff expertise in underwriting business loan guarantee transactions for businesses locating on these bases. We are also:
- Working with the Department of Treasury and the newly created North American Development Bank (NAD Bank) to develop an MOU to carry out the Community Adjustment and Investment (CAI) program under the North American Free Trade Agreement (NAFTA). RBS will be instrumental in simplifying some programmatic and administrative services needed to process applications for Business and Industry Guaranteed Loans, loan recovery, and provide other services to the CAI program.
- Developing expanded opportunities for women business owners to gain access to our programs so they can increase their business activities. Discussions are underway to expand opportunities for rural businesses owned by women to expand into international markets. This initiative will result in a strategic alliance with the Department of Commerce, Trade Development, International Trade Administration. This will open up opportunities for women business own-

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ers who will expand their business activities in rural communities and employ more rural residents.

- Developing a partnership with USDA's Cooperative State Research, Education and Extension Service and the Department of Commerce's National Institute of Standards and Technology to collaborate on developing new technology for manufacturing in rural communities. This will begin to revive the manufacturing sector which has been so valuable to rural communities in the past.
- Developing a partnership with the U.S. Small Business Administration (SBA) to include information regarding our business and economic development programs in their Business Information Centers (BIC) computer data bases. Our initial effort will focus on some 21 centers on Native American reservations.
- Increasing our assistance to small farmers to help position them to compete in the competitive global agricultural environment. Our attention must focus on resources to organize small farmers into cooperatives and enhance their economic competitiveness advantages domestically and internationally. Unless they organize them into some form which provides economic opportunities, they will continue to struggle to remain competitive. We consider this assistance to be part of the producers' safety net necessary particularly, due to the elimination of the traditional commodity programs. We are witnessing examples of how farmers are turning to cooperatives to respond more to a market oriented agriculture. For example, after the wool and mohair program was discontinued, sheep and goat producers throughout Texas and the Southwest began to organize new cooperatives to market meat and fibers.

These are a few of the strategic relationships we are encouraging throughout the rural business arena which will have a direct and positive impact on the growth of rural communities.

RBS is also very conscious of its customer service image and the types of services we provide to rural Americans. We continue to rethink and evaluate our programs and the way they are delivered to serve our customers more efficiently. Our goals are to reduce the cost to operate these programs for the taxpayers, while improving our service delivery. Through the enactment of sweeping changes in the Business and Industry (B&I) Loan Guaranteed program, we have demonstrated that this can be accomplished.

The recently published business and industry guaranteed loan regulations are shorter, clearer, and more logically organized. The material in the new regulations is about one-half that of the previous regulations. Program changes shift some responsibility for loan documentation and analysis from the Government to the lenders. This makes the program more responsive to the needs of lenders and businesses, and creates easy and fast processing of applications.

In recognition of this tremendous effort, RBS received Vice President Gore's Hammer Award for our automated application procedure for B&I lenders. Ten states participated in the user validation demonstration program for testing this new product. The new system alleviated some concerns expressed by our customers regarding requests for repetitive information, and cumbersome and complicated regulations, forms and agreements. This automated application software is scheduled for release soon and nationwide implementation. In addition, we have developed a B&I video with a new program brochures and information kit to use in outreach activities within the states to make the public more aware of the program.

In expanding visibility of our programs, RBS held a series of Business Financing Forums with financial institutions around the country. Participants included members of the American Bankers Association, Independent Banker's Association, Farmer MAC, the National Association of Guaranteed Lenders, the National Association of Investment Companies, and other trade associations. This effort increased our relationship with the lending community and has substantially increased program usage throughout the financial community. Additional efforts are planned for this fiscal year because of the heightened interests in our resources and capabilities.

Now I'd like to briefly address our program funding request.

BUSINESS AND INDUSTRY LOANS

The business and industry loan program guarantees all types of businesses including those engaged in agricultural production when it is a part of the integrated operation. These companies create and save jobs, upgrade the infrastructure, and improve the lives of rural residents.

Fiscal year 1996 was a banner year for us in rural business and the best year we have had since the late 1970's. Last year, RBS provided \$638 million in guaranteed B&I loans and was able to provide financial guarantees to 560 loans to businesses which maintained their existing employees and often created many new ones.

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An example of the types of business and communities benefiting from the B&I program is the Southern Industrial Mechanical Maintenance Company ("SIMMCO"). This company was founded in 1977 and is in Brownsville (pop. 10,019), Tennessee. The company is a leading employer in the Brownsville community. The 1990's have caused the need for the automation of the manufacturing process and update of the physical plant site and equipment. The company performs shut down mechanical maintenance service for other companies on a contract basis and manufactures liquid propane gas tanks. These are the two core operations of SIMMCO.

In order to implement the expansion of the company, United American Bank of Memphis is providing a loan for \$3.1 million with a business & industry loan guarantee. Funds will be used for expansion of an existing business. The business will construct and equip a building on real estate the business owns in Brownsville, Tennessee. The expansion will help preserve 85 jobs and provide approximately 143 new jobs. Most of the new job opportunities are expected to come from census tracts within the Haywood/Fayette Enterprise Community. This loan will also allow the business to be more feasible in its L.P. Gas Tank Operation. The employment rate in the Enterprise Community is 8.3 percent, the wage rates run as high as \$18.00 per hour for such jobs as welding.

DIRECT BUSINESS AND INDUSTRY LOANS

Many rural areas lack a competitive capital market, which leads to inadequate sources of financial assistance, especially for new businesses. Recent statistics show extensive areas of the country where, despite outreach efforts, the need for financial assistance for business development is not being met. This is especially true in areas with long term persistent poverty, such as the Mississippi Delta; areas experiencing fundamental structural changes in their economic base, such as the Pacific Northwest; and areas of long term population decline, most notably the Central Plains States.

The President's 1998 Budget includes \$50 million for B&I direct loans and to fill gaps that cannot be met through B&I Guaranteed Loans.

INTERMEDIARY RELENDING LOANS

The intermediary relending program (IRP) invests Federal funds to leverage local funds in support of rural businesses and jobs. Loans go to nonprofit intermediaries who in turn relend them to rural businesses to improve business, industry, community facilities, jobs, and economic diversity of rural areas. The program makes investment capital available to entrepreneurs who cannot otherwise obtain financing from conventional sources.

Data shows that for every \$1.00 lent to an ultimate recipient, an additional \$3.75 of leveraged funding is provided. In fiscal year 1996, \$37.6 million funded 47 loans which resulted in more than \$141.3 million of other funds being leveraged. For every \$100,000 of program loan funds, 20-25 jobs are created or saved. It is projected that once the 47 loans made in fiscal year 1996 have been reloaned (an average of 3.4 times during the life of the loan), these funds will create or save an estimated 25,000-32,000 jobs over the life of the loan.

An example of how this program is used is as follows: After a devastating fire, the Route 1 Fashions Retail clothing store in Fort Kent, Maine contacted the Northern Maine Development Council (NMDC) for counseling and assistance. The NMDC quickly responded, collaborating with a local bank and the Town of Fort Kent. The Town packaged a loan for part of the needed funds from the State of Maine Development Fund. The NMDC packaged a restructured loan with their bank and an NMDC/IRP loan. In a short time, the store was back in business and the hole left by the fire on Fort Kent's Main Street was filled with a new building. The business could maintain full time jobs that would have otherwise been lost. The business provides an important addition to the community and the cooperation shown through this project is a true northern Maine asset.

RURAL BUSINESS ENTERPRISE GRANTS

The rural business enterprise grants (RBEG) program finances and facilitates the development of small and emerging private business enterprises. This program can be used to finance and facilitate development of small emerging businesses in the rural areas and incorporated towns and cities with a population of less than 50,000.

Last year 332 grants for \$45 million were made, approximately 3,531 businesses were assisted resulting in the potential for 10,483 jobs being created and 6,961 jobs saved.

Examples of how the program was utilized are as follows: A storm ravaged the Maine coast at the end of January 1996, and left two tugboats that service the port

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of Eastport inoperable. A rural business enterprise grant was given to Eastport Port Authority in the amount of \$80,000 to rehabilitate a tugboat which was acquired through the Federal surplus property program. The Eastport Port Authority and the Port of Eastport are major employers in the region. The unemployment rate in Eastport is 13.5 percent, compared to 6.5 percent for the State. Maintaining viable port operations is essential to the community. RBS funding saved 70 jobs and there is the potential of creating 62 other jobs.

In June 1996, a \$39,580 grant was made to the Emmonak Alaska Tribal Council. The grant was made to purchase and install a primary fish processing line to their processing facility. The new line will do the initial preparation process of salmon without disrupting the production process. The new line will add four new jobs to the current 20 seasonal summer jobs in this remote Alaskan Community. The RBEG was leveraged with \$120,000 in funds from state and local sources.

The Walhalla Rural Health Association received a \$50,000 rural business enterprise grant. This grant was used to purchase medical equipment such as a portable x-ray machine, ultra sound machine and a coulter counter which assists in diagnosing serious blood diseases such as leukemia and anemia. The equipment will be leased to the Walhalla Clinic's management group (the ultimate recipient) for utilization in their clinic. The Walhalla community has raised and spent approximately \$20,000 in getting the clinic approved for operation.

RURAL ECONOMIC DEVELOPMENT LOANS AND GRANTS

The rural economic development loan program promotes rural economic development and job creation projects. These zero-interest rate loans made to Rural Utilities Service electric and telephone borrowers are reloaned to provide start-up financing, project feasibility studies, and other expenses associated with creating business enterprises in rural communities. Under this program last year we provided funds to 65 electric and telephone systems, which is anticipated to provide zero-interest loans or grants totaling \$13,093,398 to more than 70 businesses, and creating approximately 2,600 jobs.

Baker Electric Cooperative, Inc. received a \$400,000 grant to establish a revolving loan fund. The initial loan covered by the grant was to the Towner County Hospital Authority in Cando, North Dakota. The purpose of the loan was to aid in constructing and equipping a new outpatient clinic and service center to update the existing hospital facility. The project beneficiaries are the residents of Towner County and the surrounding counties who will receive health care from the new hospital and clinic facility. The employees of the hospital and clinic will also benefit due to the enhanced prospects of retaining the hospital and clinic.

COOPERATIVE SERVICES

Cooperative Services (CS) devotes its efforts to promoting the understanding and use of the cooperative form of business as a viable option for rural residents. As government support programs are changed and encouragement is given to more a market driven policy, farm operators, ranchers and other rural residents are realizing that they need more effective forms of group action in the marketplace to represent their economic interests.

Cooperative Services conducts studies, alone or in conjunction, with other federal or state institutions, to provide farmers with information on economic, financial, organizational, legal, and social aspects of cooperative activity. Technical advice assists farmer cooperatives in the development and operation of viable organizations to better serve the Nation's family farmers. Educational assistance provides farmers and other rural residents with a proper understanding, use and application of the cooperative tool.

The Nation's agricultural sector is currently experiencing rapid structural changes often referred to as the "industrialization of agriculture." United States businesses involved in agriculture are finding it increasingly necessary to have a coordinated or controlled supply of a narrowly defined raw product. As previously mentioned, we intend to devote more resources to assisting small farmers in forming cooperatives. Cooperatives are adapting their structure and activities to ensure that the cooperative businesses and their independent producer members remain competitive in this new industrialized system. The Cooperative Services, through cooperative research agreements and in-house staff, has an extensive research program that is helping the agricultural cooperative sector deal with these major structural changes. This has been especially valuable in the rapid structural changes of the pork industry. Various research publications have been developed and symposiums or other types of outreach meetings have been conducted or are being planned to get the

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findings of these studies out to the cooperatives, agricultural producers, and other resource providers.

Meat goat producers, predominantly small farmers, from Mississippi and the southern part of the U.S. have experienced difficulties in gaining access to a profitable market for their livestock. These small producers depended on individual markets and operated in an environment with little information, as the industry is in an embryonic stage. Southern States Goat Cooperative was incorporated with our assistance in 1996 and held their first auction in June of 1996. The cooperative is now holding two auctions per month and membership has expanded to more than 300 producers. As the industry develops, the cooperative will explore the feasibility of a processing facility.

As another example of cooperative development assistance, the economy of Smith Island, MD depends on the seafood business including watermen's harvested catch of crab. Historically, crab picking has been done in "out-kitchens" in each waterman's house. Although Smith Island crabmeat has always been a high quality product, the "out-kitchens" did not meet the Maryland Health regulations for seafood processing. The crab pickers are predominately women who were told they could no longer sell to the public unless the crabmeat was processed in an approved facility.

In October 1996, the new and approved facility was dedicated. Cooperative Services helped develop a business plan and assisted the board and management of this new cooperative improve their operations, establish a bookkeeping system, review financial performance, and provided guidance for board decisions. The Smith Island Crabmeat Cooperative provides a valuable source of income for the island women and their families.

RURAL COOPERATIVE DEVELOPMENT GRANTS

The rural cooperative development grants (RCDG) program, formerly the rural technology and cooperative development grant program, has the primary purpose of improving the economic condition of rural areas through the development of new cooperatives and improvement of operations for existing cooperatives. The RCDG program provides grants to nonprofit corporations and institutions of higher education to establish and operate centers for cooperative development.

The RCDG program is used to facilitate the creation or retention of jobs in rural areas through the development of new rural cooperatives, value-added processing, and rural businesses. Grants are competitive and awarded based on specific selection criteria.

APPROPRIATE TECHNOLOGY TRANSFER FOR RURAL AREAS (ATTRA)

In fiscal year 1997 one-point-three million dollars of the RCDG funding (3 million) is being used for the Appropriate Technology Transfer for Rural Areas (ATTRA) program through a cooperative agreement. This program encourages agricultural producers to adopt sustainable agricultural practices which allow them to maintain or improve profits, produce high quality food, and reduce adverse impacts to the environment. ATTRA functions as a center for information and technical assistance, staffed with sustainable agricultural specialists and accessible nationally through a toll-free telephone number. The ATTRA program was transferred to USDA in fiscal year 1996 from the Department of Interior's National Fish and Wildlife Service. In fiscal year 1996 it responded to a record 18,246 request of which 11,810 were from farmers, and 6,436 from extension, agribusiness, university, state and federal agencies.

NATIONAL SHEEP INDUSTRY IMPROVEMENT CENTER

The National Sheep Industry Improvement Center will be used to help build the capacity of the U.S. sheep and goat industries, including infrastructure development, business development, resource development and market and environmental research.

The Board of Directors, appointed in January 1997, will operate the National Sheep Industry Improvement Center. The Center is funded through a revolving fund account which allows up to 3 percent for administrative purposes. Initially the National Sheep Industry Improvement Center's revolving fund was \$20 million. Although \$30 million is authorized during the next 10 years of the program, no additional appropriations are requested for fiscal year 1998.

1890 LAND GRANT INSTITUTIONS OUTREACH INITIATIVE

The Rural Development 1890 Land Grant Initiative involves cooperative agreements with the 1890 Land Grant Universities and Community-based Organizations

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to develop income-producing projects for underdeveloped rural communities. This effort supports the President's desire to reach out to low-income, rural communities to improve their economic conditions. This initiative also supports the Executive Order to work with Historically Black Colleges and Universities. It has been funded at approximately \$2 million annually for the past three years, and is included in the salaries and expense account for 1998.

The intent of this project is direct jobs' creation in communities that are traditionally agriculturally-dependent or other natural resource-dependent. The land grant universities are among the best agriculture science and business educational programs in the nation. These agreements build on the strength of these institutions to ensure quality education related to small business development and to improve the quality of life in rural communities.

A notable example involves Michael James and JWH Industries of Florence, South Carolina. In 1996, Mr. James and JWH Industries had a faltering worm business. Mr. James requested technical assistance from South Carolina State University through RBS's, Rural Development Initiative (RDI).

Prior to his request to RDI, his business consisted of one lone employee and ten worm beds on a two-acre family-worked site in Florence, SC. After receiving technical assistance he now has ten acres in Manning, SC, five acres in Summerville, SC, a five-acre breeding facility in Trio, SC and another acre in North Carolina. Mr. James now employs 15 people and tends more than 360 worm beds at his various sites.

Also, the Japanese have expressed interest in his process of treating soil with special worms called vermicomposting that he has developed. Mr. James has developed the knowledge of how the various worms can enrich the soil, resulting in organically rich compost.

BUDGET REQUEST

I would like to highlight the following points from the 1998 Budget proposal. The primary business and industry programs are requested for 1998 as part of the Rural Community Advancement Program (RCAP). Within that program, the Budget proposes \$660 million for B&I loans of which \$610 million would be for guaranteed loans and \$50 million would be for direct loans. Rural business enterprise grants are also proposed as part of the RCAP program at a program level of about \$40.375 million. The appropriation needed to support these programs in 1998 is \$46.296 million. This appropriation is needed to support the guaranteed loan and grants program, however, the direct business and industry loan program is not projected to require any subsidy cost.

Intermediary Relending under the Rural Development Loan Fund is proposed at \$35 million for 1998. This is a slight program level reduction from the 1997 level. The budget authority appropriation required to support this activity is \$17 million.

Rural Economic Development Loans are proposed at \$25 million in 1998. In addition, the request for the rural economic development grant program is \$11.3 million. The Budget proposes that these loans and grants should be funded from the cushion of credit deposits in the Electrification and Telephone Revolving Fund, therefore no appropriation of new funds is needed. The Rural Cooperative Development Grant Program is proposed at the \$3 million level for 1998, the same as the current 1997 level.

For administrative expenses, the Budget requests \$31 million. This is an increase of \$4.6 million above 1997 which is primarily requested for activities in cooperative business assistance.

Mr. Chairman the Rural Business-Cooperative Service is proud of its achievements. Through your continued support, we intend to be full partners in serving the needs and enhancing the quality of life for residents in rural America. I would be pleased to answer any questions you or the other members may have.

PREPARED STATEMENT OF W. BRUCE CRAIN

Mr. Chairman and members of the Subcommittee, I am pleased to testify today on the President's fiscal year 1998 budget proposal of the Alternative Agricultural Research and Commercialization (AARC) Corporation. It is a pleasure to provide you with an update of the Corporation's investment successes and its real and potential impact on rural communities.

With the enactment of the 1996 Farm Bill, Congress set in motion transformational changes in agricultural policy in this country. The gradual phaseout of commodity support payments means farming must become more market-driven. To

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compete in the global marketplace, America must produce value-added products; we cannot prosper with raw commodities alone.

In short, American agriculture must be innovative to remain strong in the 21st century. The AARC Corporation is a catalyst for innovation. It is a vital link between the development of high value-added agricultural products and their successful commercialization. It is the only agency in the Federal government making equity investments in new, rural business ventures.

Commercializing new products can be an expensive and difficult process, especially in a rural locale. It can be difficult because rural areas often lack the financial and other entrepreneurial support systems concentrated in urban areas.

The AARC Corporation makes what are known as "seed capital" and "early-stage" investments. It provides the capital resources that agricultural innovators cannot get from the private sector because of their high risk. Like private venture capital firms, the AARC Corporation conducts extensive due diligence on prospective investment opportunities. Private investors respect the AARC Corporation's expertise and track record. The 66 companies AARC has funded during its brief existence will tell you that when they obtain a "USDA stamp of approval" from AARC, it opens the doors to additional financial resources from the private sector, such as later-stage investments and debt financing, that are essential to success.

The typical cycle of venture capital investments lasts approximately 8 years. We do not expect companies we fund to generate positive cash flow until their fifth or sixth year. The AARC Corporation, currently in its fifth year of operation, has invested \$28.1 million in 66 projects in 32 states. To date, these investments have attracted \$112 million in additional private financing to projects in rural communities such as Fontana, California; Ashburn, Georgia; and Wahpeton, North Dakota—places that do not show up on the radar screens of money center banks and most venture capitalists. AARC produces a substantial multiplier effect. Every dollar invested by AARC has leveraged into \$5, money that puts people to work in permanent, manufacturing jobs in rural communities.

Despite its short history and the time needed for investments to come to fruition, seven companies have already made partial repayments to the AARC Corporation. These partial repayments are testament to the due diligence and investment decisions of the AARC Board of Directors and their wide array of private sector expertise.

Once an investment is made, the AARC Corporation assists these companies by marketing their products to the banking and venture capital communities and to potential buyers of such products, such as the Federal Government. The AARC staff and Board of Directors have worked diligently to educate members of the banking community through speeches, publications, and even satellite feeds to bank officers. In addition, AARC has visited with the venture capital communities in New York, Chicago, Los Angeles, and Houston. The responses from these potential sources of funds have been extremely positive. In fact, several of the AARC companies have already received follow-on investments from these contacts that have had a tremendous impact on the profit potential of these companies. For example, Ariboard Industries of Texas used the AARC investment to attract \$2 million in equity from Raytheon Engineering. Gridcore International of California has received follow-on investments totaling \$17 million from firms including Nihon Cement, the largest cement manufacturing company in Japan. Earthgro of Connecticut was successful in attracting \$15 million in investments from Warberg-Pincus, an investment banking firm. These and other AARC-invested companies have confirmed that AARC's initial investment was key to attracting these and other additional investors into these small, mostly rural-based companies.

AARC works closely with the Small Business Administration (SBA) to open additional doors for its value-added agriculture manufacturers to private financing. Through a new arrangement, AARC companies have access to SBA's new Angel Capital Electronic or "ACE" network, a certified investor network of individuals with net worth of at least \$1 million. This new alliance with SBA will further leverage AARC's investment funds by opening the door to an important source of potential investment dollars that previously has been difficult for AARC companies to access.

Section 729 of the 1996 Farm Bill included a provision that allows Federal agencies to establish set-asides and preferences for products commercialized with the assistance of AARC. The AARC staff is working to educate Federal procurement officials about AARC-funded products, which are all environmentally friendly, and about the authority that allows them to establish procedures for the purchase of these products. Access to this huge Federal Government market can greatly enhance the financial success of AARC-funded companies and their ability to repay their investments, and the earnings on these investments to the AARC Corporation.

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Based on an analysis of the AARC portfolio prepared by the Agricultural Utilization Research Institute (AURI) and the Kansas Technology Enterprise Corporation (KTEC) in 1996, AARC investments have added on the average 13 times more value to the agricultural raw products and forestry materials. In addition, AARC investments have created 5,000 new jobs, mostly in rural areas of the country. Therefore, based on AARC's current leverage ratio, one job is created for every \$5,000 invested by the AARC Corporation.

To place a more human face on these numbers, I want to briefly describe one AARC funded company and the difference we are together making in its community.

Indian Creek Mesquite of Brownwood, Texas, is manufacturing and selling a mesquite wood product that serves as an alternative to charcoal. The mesquite is paraffin-coated and packaged in a paraffin-coated bag which can be ignited without the use of lighter fluid or other added materials. Mesquite wood carries a negative value due to the cost associated with removing the trees from pasture land. This cost averages about \$150 per acre.

Because of the added value generated by Indian Creek Mesquite, the value of mesquite has gone from a negative \$150 per acre to over \$5,000 per acre. In addition, Indian Creek Mesquite has created 14 new jobs in the Brownwood area that otherwise would not exist.

With the necessary resources, the AARC Corporation can continue and even expand its role in creating value-added products and jobs that benefit rural America. With AARC serving in the capacity of facilitator, new private sector investment dollars will reach entrepreneurs that otherwise would not be available. The AARC Corporation requests \$10 million to continue its mission. The AARC Corporation pledges to work diligently to invest its funds in projects that add the most value to commodities and rural communities, and work to locate and expand markets for these new bio-based industrial products. Based on the Corporation's track record during this short time, we feel confident in assuring the Subcommittee that these resources will be used wisely and effectively.

GENERAL QUESTIONS

Senator COCHRAN. I apologize for our hearing getting underway a little late this morning. We had a series of votes over on the floor of the Senate. Those are out of the way now. I left before we had our final vote total, but I think we probably passed the Nuclear Waste Storage Act. We dealt with several amendments this morning to that bill.

I have a number of questions on a variety of subjects, but I am not going to proceed. I am going to let my colleague from Montana proceed to ask whatever questions he has. I know he has other obligations in other committees in the Senate today.

Senator BURNS, if you have questions, please proceed.

Senator BURNS. Mr. Chairman, thank you very much. I have very few questions of this panel, which I think I explained in my opening statement.

I am struck this morning that a member of the bureaucracy would walk forward and say I was wrong last year. [Laughter.]

That is highly unusual in this town. And those of you who are visiting this committee for the first time, you are seeing history made. [Laughter.]

And not even we admit that we are wrong. [Laughter.]

Mrs. THOMPSON. Well, I never admitted I was wrong when I was a Member of the House. [Laughter.]

Senator BURNS. So this week has really started off.

I, again, would just want to work with you on the budget. And I was asking the chairman, on the transfer of money—I chair Military Construction, and we do ours a little bit different over there, but I can appreciate how this transfer has kind of helped you with some versatility to do some things maybe that have to be done and

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where it gives you some choice to make some decisions. And I think you should have that ability to make those decisions.

We have to trust our managers and our people to make those calls, and without a lot of fuss being made up here on this Hill. But I want to congratulate you for your increases in RUS. I am very much a promoter of that. I think as we deal with distances and this type of thing, this infrastructure becomes very, very important to us. And I appreciate the approach that this budget has taken this year.

And I thank the chairman.

Senator COCHRAN. Thank you very much, Senator.

We are constrained this year in our budget process by provisions of the so-called FAIR Act, the farm bill that was passed last year. It authorizes the Rural Community Advancement Program. Funding for some of the rural development programs is to be consolidated under that program.

BUDGET REQUEST AND THE 1996 FARM BILL

My first question is whether or not the budget that is submitted for the review of the subcommittee reflects the authorities under the farm bill last year, insofar as the Rural Community Advancement Program is concerned. I know there are five different sub-accounts. There is a "Rural communities facilities" account, "Rural utilities" account, "Rural business and cooperative development" account, the "National office reserve" account, and the "Federally recognized Indian tribe" account.

You have the authority under this law, as I understand it, to transfer the money to the rural development State directors, then proceed to divide the moneys or allocate the moneys among the five accounts, within certain limitations, to meet State priorities. Does the submission that we have before us, Madam Secretary, take all of that into account? And are the specific requests for funding in accordance with the authorization of the FAIR Act?

Mrs. THOMPSON. I believe that it is. I want to confirm my response, but I believe that everything is consistent.

Senator COCHRAN. Maybe Mr. Kaplan can confirm that for us.

Mr. KAPLAN. Yes; it is consistent with FAIR Act.

Senator COCHRAN. In that connection, let me ask whether we have complicated this or whether the legislative committee in the Congress, by adopting the FAIR Act, has complicated this, so that we have a hard time understanding where the priorities are. I am interested, for example, in rural water and sewer system accounts. We have a lot of unmet needs in our rural areas in my State and, I know, generally, throughout the country. One of the main areas of emphasis has been in trying to provide the quality of life opportunities for rural communities that we have in a lot of our urban areas and areas near the larger cities.

What is the emphasis in this budget request, if you can tell us, with respect to those traditional programs of rural development?

Mrs. THOMPSON. Well, the emphasis is certainly strong with regard to those programs that serve the three areas that are covered in the three agencies. The reason that we would like the additional flexibility that RCAP would provide is that many times—well, al-

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ways—as you go from State to State, the needs are different. And at different points in time, those needs change.

For example, there may be a community that has a need for a water system, but funds are insufficient to finance the project from the water and waste account, but there is funding available in other accounts and there is no immediate demand. The transfer of funds and the shifting of funds to best meet not only the long-term needs, but the short-term needs for each of the States would be most helpful to our State directors.

RURAL UTILITIES SERVICE

Senator COCHRAN. One thing I noticed in reviewing the notes that I have is that the President's budget request proposes a decrease in the program level funding for direct water and waste disposal loans. I am curious as to why the administration made that decision. There are a number of increases, and you pointed them out, but this is a decrease. Are we at a point where we do not need funds in this program as we did in the past? Why would the administration submit a budget that calls for a decrease in this particular area?

Mrs. THOMPSON. Well, I am going to defer to Administrator Beyer to answer in greater detail, but the biggest challenge is that there are many needs in many areas, and we are very committed to balancing the budget. And that means that tough decisions have to be made. Additional money could be spent in virtually every area and it would enhance the quality of life in rural communities across the country. But tough budget decisions have to be made.

Senator COCHRAN. Yes.

Mrs. THOMPSON. But let me turn it over to Wally Beyer.

Senator COCHRAN. Mr. Beyer.

Mr. BEYER. Thank you, Mr. Chairman.

Senator BUMPERS. Mr. Chairman, if I may interrupt. How much is the cut?

Senator COCHRAN. It is very small, \$739 million as compared with \$734 million.

Mr. BEYER. Yes; that is exactly what I was going to point out, Mr. Chairman. It is very small.

Senator COCHRAN. I just wanted to verify that I had the right figures in front of me and that it was a decrease.

Mr. BEYER. There is a decrease in the water and waste water, but it is very small.

The other thing we are doing is a better job of leveraging the scarce Federal dollars. We are, in fact, doing that with States and with private dollars. So we are trying to do the best job we can in maximizing the budget authority that we have.

Senator COCHRAN. There is also a small decrease in the Circuit Rider Program. This is a program where technical assistance is provided to small community water associations and the like.

Mr. BEYER. Yes.

Senator COCHRAN. What is the assessment of that program? Is it not providing benefits or is this another small decrease that simply reflects budget realities?

Mr. BEYER. Mr. Chairman, the Circuit Rider Program is a very valuable program for rural America without question. It is simply

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a refinement. It is not an abandonment by any stretch of imagination. And here again it is a very, very small decrease.

Senator COCHRAN. I notice on page 11 of your statement, you talk about the goals—as we approach the consideration of legislation here in Congress to deregulate the electric utility industry—you point out on page 11 that you think there are two important considerations that we need to keep in mind as goals that should be part of the development of any restructuring of this industry. The first is to ensure the continued availability of reliable, high-quality electric service at a reasonable cost to rural customers. And the second is to protect the integrity of the Government's loan portfolio.

I just want to let you know that I share those goals and congratulate you on thinking about how the Rural Utilities Service that we have supported here in Congress for a long time ought to think in terms of the restructuring of the industry. Does the legislation being considered by Congress, in your view, meet or achieve those goals?

Mr. BEYER. Mr. Chairman, the Rural Utilities Service is really at the vortex of revolutionary changes in the infrastructure in this country, as you know. There is so much legislation floating around right now and given the environment, the States' rights environment that we live in, we are approaching it with a general view of encouraging and trying to ensure the best we can that quality, reliable infrastructure at reasonable cost will be maintained in rural America.

I mean if this thing is going to be open access, and cash is going to be king, then it is going to be even more difficult without some congressional help. And you couple that with the patchwork deregulation that is going on State by State, and it is a very nervous time for rural Americans in looking forward to ensure that quality infrastructure is available.

I think Congress has spoken quite loudly—they did speak loudly in the telecommunications deregulation last year—in ensuring a rural safety net network. And, second, as we move through the process of molding a new rural electric infrastructure, we would certainly encourage Congress to be very sensitive to a universal service pool concept for the electric industry as well. We certainly have concerns about loan security issues.

We have challenges all over the place in various States on our all-requirements contract, the basic documentations in loan security. We are working with that as quickly and as diligently as we can, in assisting borrowers to prepare themselves for this new, radically changed environment. So we know that your committee is very interested in this, and we would hope that you would take a very active role in watching this process unfold.

Senator COCHRAN. Well, I think we ought to be vigilant and keep in mind, as you point out in your statement, that we do not want to adopt reform legislation and then wake up and find out that those who live in the small towns and the rural communities are going to see their rates skyrocket or they are going to lose service or something like that. That would be catastrophic. We have to be very careful.

Senator Bumpers.

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Senator BUMPERS. Thank you, Mr. Chairman.

Mr. Beyer, just to pursue the question Senator Cochran just asked you, let me say, first of all, that the REA has never had a stronger champion in the Congress than I have been. Because you have heard me say many times what it did for the area I grew up in. In addition to that, it saved my father's business, because he was a smalltown merchant, and it gave him an opportunity to sell electrical appliances in rural areas. His business really began to boom after that. And REA operated out of the back of his hardware store for years.

So I come to this deregulation thing with considerable qualms and concerns. But I got into it, No. 1, because I became ranking member of the Energy Committee, and Senator Johnston had originally started this, and we all agreed that it was going to happen. And only if I took charge of it would it happen in a sane, methodical way. [Laughter.]

But let me just make this point and see if you agree with it. And I know that the co-ops are the biggest adversaries of this whole concept. And I understand that. They have all been in my office, and I am sure will be again and again. And they have nothing to fear insofar as my power to control this thing is determined, because I am going to make sure that the utilities are treated fairly, that they are not all sent into bankruptcy because of a crazy scheme.

The second reason I got into it, other than being the ranking member, was that this thing is going to happen whether we do it here or not. Seven States have already adopted retail competition, restructuring the electrical industry in their States—seven. Four more have it under consideration. It is a very trendy thing. And as I have said in some of my speeches, the House is probably going to pass this. You have a mix in the House of liberals who think anything that benefits consumers is good and you have conservatives who think everything is fixed by competition. So you have those two forces at work in the House, which indicate that this thing is probably going to pass the House this year.

But what I have tried to tell the co-ops and everybody else is if you allow 50 States to do this on a random, harum-scarum, ad hoc basis, you are going to wind up terribly sorry that we did not have a national guideline for this to happen. For example, Northeast Utilities is suing New Hampshire right now because New Hampshire is one of the seven States that has already gone to retail competition, and they have kind of a convoluted system of allowing people to recover their stranded cost. That is, if their generators—because of lost customers to competition—if their generators are no longer economical, they can go to the State public service commission and say, we want to recover, we want you to pay us for our own recovered cost of this generating plant.

And they say that New Hampshire law shorted them the \$434 million. Now, I do not want to go into this whole electrical deregulation thing here. All I am saying is, if you were a utility operating in three States and you had three States—two with retail competition and one with none, and you find yourself in dire straits because of competition, you are not going to get any stranded cost from the State that has not gone retail. And on the two that have

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gone retail, they may have entirely different formula for determining stranded cost.

Now, it is not just the co-ops, but the whole utility industry, in my opinion, that would be swamped—absolutely swamped if that happened. And it is beginning to happen, even though seven States are all we have that have gone to retail competition. So, as I say, I understand the concern. I am concerned about that person in Arkansas, who lives a mile down the lane, and REA has built a line at a considerable cost of thousands of dollars to put power down to that house. And I will not stand—at least I would not vote for it nor support or speak for any kind of a bill that did not take care of that customer.

I want to make sure, if this is not good for everybody, it is not good for anybody, in my book. Hubert Humphrey used to say that America would never be a good place for anybody to live until it is a good place for all of us to live. And I champion that same phrase in connection with electricity.

But while I know the co-ops are very much opposed to this concept, they are not likely to be exempt. And if they are not exempt, a national guideline, in my opinion, is going to be infinitely preferable to them trying to deal with—does REA operate in all 50 States?

Mr. BEYER. Not today, Senator.

Senator BUMPERS. How many States does it operate in?

Mr. BEYER. With your permission, I will have to get back to you on that. It is the bulk of them. California, for example, has four rural electrics. And some of the Northeast States. But that is about it. It is pretty broadly covered.

Senator BUMPERS. Do you quarrel with anything I just got through saying?

Mr. BEYER. Senator, I do not quarrel with it at all. We are very, very concerned about stranded investment. We are very, very concerned about reliability into the future. If this thing is wide open and it is customer choice and you have the ability to switch consumers, the industrial and commercial customers are going to be gone first. Because that is where the cash is. And there is where the power marketers are going to go. That is where the folks with low-cost generation are going to go.

And there is going to be a switch in consumers. And that is just going to be a bigger problem. We are very concerned about the national guidelines. I am speaking for myself now, but I personally think there needs to be some national guidelines for this patchwork direction that it is going in.

Senator BUMPERS. Well, you are speaking for yourself, I can tell you that.

Mr. BEYER. I am speaking for myself, Mr. Chairman. I hope you do not mind that.

And national guidelines would seem to me to be critical in the interest of reliability. We do not even understand what it is like to have systems that go on and off. Because when we turn the switch on in America, something happens. We do not even think about it. And if we start getting into this patchwork network, it threatens reliability.

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The other thing that we would encourage is some universal service concept in the electric system, not unlike the telecommunications. That is entirely doable. It would make a lot of sense to ensure that rural America has the ability to maintain quality, reliable, reasonable-cost electric service.

Senator BUMPERS. Mr. Beyer, how much money is in the budget this year for REA for rural electricity?

Mr. BEYER. \$29 million in budget authority. And if I may take this opportunity, Mr. Chairman, that \$29 million will generate \$825 million Federal dollars. In addition to that, it leverages 3 additional private dollars. So about \$3.3 billion will be invested in electric infrastructure in fiscal year 1998. That is a tremendous leveraging of the scarce Federal dollars.

In fact, we are going to do a piece on the evolution of leveraging. In my understanding, that is the way government is supposed to work. You are supposed to get this thing going, and then you use government to leverage private capital. And that is exactly what this program has done.

Probably the most value in the electric and telecommunications program today is the credit support leverages \$3 in investment for 1 Federal dollar.

Senator BUMPERS. How about telephone, do you have money in there for rural telephone service?

Mr. BEYER. Yes.

Senator BUMPERS. How much?

Mr. BEYER. The telecommunications is \$1.9 million, which will leverage—actually, the telecommunications program leverages about 4.3 private dollars for every Federal dollar. It is a little bit better leveraging in telecommunications.

Senator BUMPERS. Those are very small figures. And, of course, you know one of the things that we still hear around here from some sources is that REA has outlived its usefulness. They ought to be cut loose. There is nothing wrong with them being a cooperative, but they do not need Government subsidies. What is your response to that?

Mr. BEYER. My response to that is the consideration of reliability, consideration of continuing need for capital to constantly improve and replace antiquated systems, to modernize the system. That is a never-ending process in the infrastructure. So there will be a continuing need for infrastructure investments in the years.

Take, for example, the technology in telecommunications. My goodness, technology is just changing the landscape in telecommunications. And certainly you have to have a continuing availability of capital to keep that going.

Mrs. THOMPSON. If I might also add in response that virtually all electric utilities are subsidized through the tax code. The other electric utilities are subsidized through the tax code. And in fact, per consumer, rural electric users are receiving a smaller subsidy. That is per consumer.

In answer to your question about the number of States that have rural electric cooperatives, the number is 46. And let me also say that I know you would like an official administration position on some of the legislation that is being considered by the Congress, and if you would like that, we would certainly be glad to—

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Senator BUMPERS. I would like that.

Mrs. THOMPSON. We will provide that for you, then, on each of the pieces of legislation.

Senator BUMPERS. Yes; that would be very helpful. That is what I would like for us to have in our record, so we can consider all these options that we have before the Congress, with a view toward how they will affect those who live in rural communities and the small towns of America.

Mrs. THOMPSON. We will provide for you the official administration position.

Senator BUMPERS. Thank you very much.

[The information follows:]

Legislative policy on electric utility restructuring includes several departments of the Federal government. Administration policy is being developed at this time. USDA feels that two factors are vitally important in any legislative action that impacts the electric utility industry.

First, the taxpayers expect us to protect the integrity of the Government's loan portfolio and we take that responsibility very seriously. The second concern is that ensuring the continued availability of reliable, high quality service at a reasonable cost to consumers in all rural areas of the country is critically important.

RURAL HOUSING SERVICE

Senator BUMPERS. Mr. Chairman, just a couple of quick questions.

Mr. Shadburn, I have language I intend to offer on the supplemental that would provide some help for the storm-ravaged part of my State. We had probably the second- or third-worst tornado season we have ever had. And I will share this language with you before we offer it. But I would like for the USDA to be on board with it, because I want some housing assistance for Arkadelphia in particular, but also especially for College Station, which is a very, very poor African-American community, which is a suburb of Little Rock.

And, finally, on housing, Mr. Shadburn, your budget requests \$52 million for HUD section 8 contracts. Why are we subsidizing HUD?

Mr. SHADBURN. Well, Senator, what we are asking for is the actual transfer of the budget authority from the HUD section 8 contracts that are presently used in our section 515 projects into RHS 5-year rental assistance [RA] contracts. There are currently 46,000 HUD section 8 units in over 1,500 515 projects. In an effort to save taxpayers money over the long run, the administration is proposing this transfer.

For fiscal year 1998, the budget proposal requests \$52,497,000 of rental assistance to replace 3,665 units of expiring section 8 in 515 projects. Over the next 8 years, the administration recommended that all 46,000 section 8 units be converted to RHS RA, provided Congress accommodates the adjustments to the 602(b) allocations for both Appropriation Committees of Jurisdiction.

The budget cost for HUD to renew the 3,665 expiring section 8 units for 1 year would be approximately \$20 million for 1-year HUD contracts compared to approximately the \$52 million for RHS 5-year rental assistance contracts. The net cost in the short term would be higher, but after 3 years there would be significant sav-

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ing. At the conclusion of the full conversion in 2005, an estimated \$291 million would be saved.

Senator BUMPERS. I am not sure I understand that, but my time is about up. Let me just ask you this final question.

Section 515 rental assistance, that program goes from \$16.8 to \$540.9 million. Why such a staggering increase? Have we misread that?

Mr. SHADBURN. Yes, sir; I think that the \$540 million figure is consistent with what we have been requesting over the last several years.

Senator BUMPERS. And this year, 1997, you only have \$16.8 million in the program?

Mr. SHADBURN. No, sir; we have a request in the budget for—are you talking about in fiscal year 1997 or 1998, sir?

Senator BUMPERS. 1997.

Mr. SHADBURN. OK, in fiscal year 1997, it is \$518 million.

Senator BUMPERS. \$518 million this year, and you are asking for \$540 million next year. OK, then we just got a bad figure here.

Thank you very much.

Senator COCHRAN. Thank you, Senator.

Senator HARKIN. Thank you very much, Mr. Chairman.

Mrs. THOMPSON. May I answer a question of Senator Bumpers before you ask a question?

Senator COCHRAN. That is up to Senator Harkin.

Senator HARKIN. You can ask a question. I do not know if I will let him answer it, but you can ask him. [Laughter.]

Mrs. THOMPSON. Well, I am not sure I heard Jan answer your question regarding your supplemental language. And maybe he did and it just slipped. But we have reviewed your supplemental language, and it is quite acceptable to us.

Senator BUMPERS. Good. Thank you very much, Mrs. Thompson.

Senator HARKIN. I was afraid you were going to ask him a question. He has been known to give answers that can go on for quite a while. And I did not want to get bogged down here in the middle of the afternoon. [Laughter.]

ALTERNATIVE AGRICULTURAL RESEARCH AND COMMERCIALIZATION CORPORATION

Well, guess what I want to ask about, Mrs. Thompson? I want to talk about AARC. I have been a strong supporter of that, as you know. In 1987, I introduced the legislation that we worked on for a couple or 3 years and, with some changes, it was finally adopted in the 1990 farm bill. That created AARC. It was a bipartisan effort. Then-Secretary Madigan was a strong supporter of it. He was then in the House of Representatives.

It is a Government agency that is providing very hard-to-acquire venture capital for businesses. It is making real differences in a lot of companies. But the dollars available are much too limited. I just have a series of questions on the subject of AARC.

Your statement makes reference to the fact that the key to improving economies in rural areas is the creation of business job opportunities. One of the successes you cite is how AARC is working with the private sector to create new opportunities. Can you provide a couple of examples of the products that have been commer-

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cialized? And, in particular, what that may mean for farmers? Can you or Mr. Crain? I do not know—whichever.

Mrs. THOMPSON. Yes; I would be delighted to answer those questions, because we have had considerable success in AARC. And one example is the use of peanut hulls to be converted into a charcoal that is used in water purification, which then changes the value of the peanut hull to the producer from a cost of \$7 per ton, I believe, to a positive \$300 per ton. That is, to me, a significant value-added matter.

We have had success, as you know, in the State of Iowa, as well as other States, with using wheat straw for wallboard. And it simply increases the demand sometimes for products that are actual waste. And so it has been a very successful program. It also means more jobs in rural communities. And so it is really a win-win program, where the farmer wins because the value of her or his commodity goes up, and the local community wins because jobs are created.

Senator HARKIN. There are a lot of other examples, I know. And if you would just provide those for the record, I would appreciate it.

[The information follows:]

Almost the entire portfolio of products could be utilized by the Federal government. For example, the U.S. Postal Service (USPS) is constructing “green” buildings around the country. One facility now being constructed near Dallas, Texas, will utilize compressed wheat straw walls produced by Agriboard Industries in nearby Electra, Texas. We believe other AARC-supported construction materials may also be used in that building.

The USPS has also contracted with Gridcore Systems International (GSI) to produce trash cans for use in post offices. The source of the raw materials used to make the strong, lightweight honeycomb panels for the trash cans is undeliverable bulk mail. We support the way the USPS has endorsed environmentally friendly building products from the AARC Corporation. We are still talking with USPS about using other products in the AARC Corporation portfolio in their course of business.

Gridcore has supplied samples and is also talking with Unicor, part of the Prison Industries Program, about making furniture.

Discussions are currently underway with the Pentagon and several of the AARC building material suppliers to provide material to renovate and “green” the Pentagon. Use of AARC materials in this multi-year project could have a major positive impact on these companies.

Phenix BioComposites produces Environ from soybean meal and waste newspaper. It is a replacement for hardwood and looks like granite. The Natural Resources Defense Council (NRDC) used Environ for the counter tops and work surfaces in its new headquarters built last year, in Washington, DC.

PrimeBoard uses 100 percent wheat straw to produce Wheat Board, a particle board replacement. This product is being widely used for manufacturing cabinets, furniture, and millwork. NRDC’s counter underlayment is from PrimeBoard and its cabinets are also made from Wheat Board.

Seed-based Lubricants.—International Lubricants Inc. (ILI) produces a line of biodegradable seed-based lubricants—everything from transmission additives, to all purpose lubricants, to two-cycle oil to industrial lubricants. Although the seed-based lubricants are environmentally preferable, these petroleum replacements face stiff competition from the existing petroleum-based products. In spite of the competition, some sales to the U.S. Air Force have taken place. Vegetable oil based lubricants could also be used with weapons and in the engines of high-performance vehicles.

The Leahy-Wolf Company uses canola oil as a lubricant for concrete forms. As the Federal government continues to build new buildings and renovate old ones, or pours cement in environmentally-sensitive areas (bridges over waterways for instance), this product may be specified.

Other Fluids.—Windshield washer fluid produced by Aquinas Technologies that is made from ethanol would seem to be a natural for all vehicles.

Absorbents.—There are several products in the AARC portfolio which will help clean up oil spills. Low value wool from Hobbs Bonded Fibers has been purchased

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for use at military bases in Texas to catch and hold petroleum drips from vehicles. Two other products show great promise in remediating hydrocarbons. One is Oil Gator, the Product Services Marketing Group, which is made from cotton seed lint. It has been used to remediate spilled petroleum. Kenaf core can also be used to absorb and remediate hydrocarbons. These products can be used to clean up spills from existing contaminated sites, not just new spills. As military properties are being cleaned up, these products are likely to be considered.

Filter Material.—Scientific Ag Industries makes activated carbon made from peanut hulls. These products can be used in water and air filtration systems and can also be used to remediate soils. It's also cheaper and of better quality than imported materials.

Soil Amendments.—Many military bases are located in places with poor soil conditions. Biorecycling Technologies, Inc. is currently working with the Marine Corps Ground Combat Center at Twenty Nine Palms, California, to improve soil conditions in the military housing area, the golf course, and recreation sites, using a variety of fertilizers and soil amendments derived from cow manure.

Earthgro Incorporated makes a variety of potting mixes utilizing plant and animal wastes. These can be used with interior potted plants and exterior plantings as an ideal substitute for peat, a finite and imported material, and petroleum-based fertilizers.

Cleaners.—The AARC Corporation has invested in a number of environmentally-friendly cleaning products. Interchem Environmental produces a line of solvents from soybeans including graffiti remover, paving equipment, tar remover, and cleaners for printing presses.

Shadow Lake makes Citra-Solv, a multi-purpose cleaner made from a powerful citrus extract, along with a number of other natural products—castile soap from essential oils and Air Scense, an air freshener from essential oils, which absorbs odors.

MM Manufacturing produces waterless hand cleaner from corn oil.

Tree-Free Paper.—KP Products uses kenaf, an annual fiber plant, to produce tree-free, chlorine-free paper.

Starch-based Plastics.—Several AARC-supported companies produce a variety of coatings and films from vegetable starch. For instance, StarchTech makes biodegradable packing peanuts, which replace similar petroleum-based products. The Environmental Protection Agency has been a major purchaser of these starch-based peanuts, which dissolve in water.

Forestry Materials.—Indian Creek Mesquite coats mesquite wood chunks with vegetable based paraffin in a "Light The Bag" application. No starter fluid is necessary. We can report that sales of this product are brisk in USDA's employee-owned store located in the sub-basement of the South Building.

Cat Litter.—BioPlus Incorporated products biodegradable, flushable cat litter from peanut hulls. SSM Environmental Technologies Inc. uses corn stover, a post harvest residue, as its base to also produce an environmentally friendly cat litter.

Senator HARKIN. How much money has AARC invested in companies since its inception? And what additional funding from private sources is going to these companies? I just want to know about the leveraging aspects.

Mrs. THOMPSON. Yes; I have that number here. But Bruce Crain, the Executive Director, can probably answer that off the top of his head.

Mr. CRAIN. Senator Harkin, to date, we have invested \$28.1 million and we have leveraged another \$112 million of private dollars. It is about a 4-to-1 leveraging ratio. Now, after that first leveraging takes place, we have also been successful in achieving follow-on financing into these companies. We pulled the data on five companies in which we have invested \$3.7 million. And in those five companies, we had leveraged an additional \$57 million of private equity.

That shows us that putting a USDA stamp of approval on these companies is successful in attracting that all-important private debt and equity into these companies.

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Senator HARKIN. Are some of them going public? What is the likelihood of some of them going public?

Mr. CRAIN. I think the likelihood is very good that most of them will go public. When they come to us, we are pushing them in that direction. Because we want to cash out and exercise our put option or they can exercise their call option in the fifth through eighth years. We are probably about 18 months away from three IPO's, we think, at this stage. But, to date, we are having a lot of success in meeting with venture capitalists and investment bankers in New York and other States in areas that are coming in behind us with these dollars. And we are finding, like I said, that USDA stamp of approval is making a difference.

Senator HARKIN. What is the average length of time for companies acquiring venture capital funds to really kind of get up and get going and get in the private sector?

Mr. CRAIN. Based on the data we have gathered from venture capital experts, it takes about 5 to 6 years for a company to experience a positive cash flow. AARC made its first investments in 1993. That means, next year, 1998, would be the first year we would really be expecting significant returns.

We structure our deals where we are going to get four to five times our money back in the form of a risk premium for our investment. So we are confident that we can meet that schedule and it will produce significant returns.

Senator HARKIN. How much funding do you believe AARC could effectively spend in fiscal year 1998? This is the Appropriations Committee; how much money do you think you could effectively spend?

Mrs. THOMPSON. Well, I actually think that it is almost unlimited. It depends on only the creativity and the initiative that is out there. And there is considerable creativity and there is considerable initiative in rural communities. So I think that it is almost open ended.

Senator HARKIN. How much did we have in the Appropriations Committee last year?

Mrs. THOMPSON. I believe it was \$7 million.

Senator BUMPERS. If anybody knows the answer to that question, it is him. [Laughter.]

Senator HARKIN. I am just making a record.

Mrs. THOMPSON. Do you think he just wants me to have this in the record? [Laughter.]

Senator HARKIN. Stick around and you will hear it more. Because I think this is where it is. This is where we are going to have the value added and we are going to create jobs and provide more industry in rural areas.

I guess what I am looking for is the budget request this year was how much?

Mrs. THOMPSON. \$10 million.

Senator HARKIN. Well, if it is doing all of these great things and we are moving ahead, why do we get a \$10 million request? That is what I am trying to figure out. Everyone I have talked to indicates that they could use more money. It is a wise investment. People are going to pay it back. It is doing good research. And we have this sort of modest, timid kind of an approach. What did you say

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that they were asking for, \$500 million? What was that other thing you just said, for what?

Senator BUMPERS. That has been too long ago. [Laughter.]

Senator HARKIN. Yes; about one-half hour.

Senator BUMPERS. That was the 515 Rental Assistance Program.

Senator HARKIN. Oh, the 515 Rental Assistance Program. They cannot pay the rent unless they have jobs. This provides the kind of jobs they need so they can pay your rent, Senator Bumpers.

Mrs. THOMPSON. Well, Senator, I have heard you speak on AARC a number of times, and you are very persuasive. I have been working with the White House on this issue and believe that we might be able to get support for up to \$20 million for fiscal year 1998 on the part of the administration.

Senator HARKIN. I hope so.

Mrs. THOMPSON. You are very persuasive.

Senator HARKIN. I still think that is very low. I think that we have just been muddling along here. And I have basically taken at face value some indications from this administration that they were going to boost their request for this. Then 1 year slips by, and they say, well, then we will do it next year. The next year slips by and I am through having it slip by any longer. Everything that I see indicates that there is a bright future for it.

Let me ask one last question. I know the answer to it, but I want to get it on the record. Do other countries have a program like AARC?

Mrs. THOMPSON. I am going to let Bruce Crain answer that specifically, but there are some interesting things that happen in other countries.

Mr. CRAIN. Senator, Canada, right now, is establishing a value-added program. And I think the Canadian Government has appropriated \$100 million for that program. A lot of that will be spent by individual provinces.

Australia has a similar program. And we have just recently learned that the People's Republic of China has a program which is very similar, as does Germany which has a budget of \$53 million. And in a recent meeting that I participated in with some of my counterparts in those groups, they are looking at the AARC model as to how to develop a value-added-type program in their countries. Because they like the fact that we are able to leverage private dollars so successfully. And they are attuned to the fact that for every dollar of research, it takes \$100 to commercialize that research.

Senator HARKIN. Well, I have followed it very closely and I have seen the companies that have been invested in. And everything looks like it is going to be a good program. And obviously not everyone is going to come up a winner. We know that. That is the nature of this business. But, overall, it seems to me, that you are putting the money out there, and these kind of businesses are going to add value to crops, provide jobs in rural areas, and I think that is the direction we have to go.

I just hope that we can, Mr. Chairman, find the \$20 million. We were supposed to have done that last year and we did not. So I said, OK, we will wait another year. So I was greatly disappointed when I saw the budget request come in again at last year's level

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for something that is actually building jobs in rural America and leveraging what, 4 to 1, private money.

Mrs. THOMPSON. Senator, I will do all I can to work with you on AARC.

Senator HARKIN. I appreciate that. Thank you very much.

Thank you, Mr. Chairman.

Senator COCHRAN. Thank you, Senator.

RURAL HOUSING SERVICE

Mr. Shadburn, I know you were listening when Mr. Beyer talked about leveraging the funds available for rural utilities with private sector investment dollars. And I was curious to know whether your experience in the housing programs is that we are leveraging in the same kind of way with housing dollars as we are in utility dollars. What can you tell us about the programs under your jurisdiction, as far as attracting private investment is concerned?

Mr. SHADBURN. Well, Senator, we are very proud in the Rural Housing Service of the leveraging that we are doing. Obviously, we are focusing on attracting additional private investment—in the direct program, we are requiring a goal of at least 20 percent of our direct housing money to be leveraged by each rural development State office. We also have the Real Home Loan Partnership that we initiated in fiscal year 1996 with Rural LISC, the Federal Home Loan Bank and community development corporations, where we now have 17 States that are working to leverage funding.

We also are working with the State housing finance agencies and the private lenders. So we have focused in each of our programs, the direct single-family program, our guaranteed single-family and multifamily housing program, our guaranteed and direct community facilities program, and likewise in our 515 program. So, in all of our programs, we are focusing on leveraging with partners to make our funds go further.

Senator COCHRAN. We have also heard that if you have a program that has as its goal the ownership of the housing unit by those who are being identified as beneficiaries of the program, that you are more likely to have property that is well cared for and that pride in ownership and other things flow from that experience—more responsibility for family, getting a job, for doing the things that have moved this country forward economically. My question is, Is that something that is real or imagined? Are we seeing those kinds of results flow from our rural housing programs that encourage ownership or that move someone toward owning their own home?

Mr. SHADBURN. Yes; most definitely, sir. We are focused at the Rural Housing Service on just the things that you were talking about there. But, in addition, it certainly benefits the total family, especially the children, because of their ability to live in safe, sanitary, and decent housing. It allows them to do better educationally. It has been proven. And it builds and supports the family unit. And we are finding that as we focus on our servicing and portfolio management, that we are assisting in making successful homeowners.

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RURAL BUSINESS-COOPERATIVE SERVICE

Senator COCHRAN. Mr. Watkins, the programs under your jurisdiction have been very helpful in many respects in my State, particularly those in enterprise zones that were identified where there is a lack of job opportunities, providing loan funds and even grants in some cases to businesses and to new initiatives to provide jobs. It has made a big difference in a lot of people's lives.

What is your assessment of those programs in the rural enterprise communities? Have they been working or not?

Mr. WATKINS. Mr. Chairman, thank you very much for the question.

Our experience to date is that as those communities develop their expertise and their capacity to understand how Federal programs can really be used to benefit their communities, as we market and promote the programs to the private sector, business-owners and entrepreneurs in those local communities, then, yes, these programs have been utilized and they make a significant difference in assisting businesses establish themselves and locate in the empowerment zones and enterprise communities.

Senator COCHRAN. When some of these programs were just starting up, I had gotten the impression that there were more meetings being held than loans being made. Are you still having more meetings than loans being made?

Mr. WATKINS. Well, Mr. Chairman, that was probably a true assessment when the program first began, because the overriding philosophy of the program was that everyone in the local community was to be involved in the empowerment zones/enterprise community program. In order to be involved, residents who had never worked together were brought together for their communities economic development. They had to develop their capacity and expertise, to understand how this initiative would benefit them.

We encouraged the continuation of meetings. Now, whether or not there are more meetings today than there are program assistance being made to those communities, from a personal perspective certainly meetings are continuing, but the resources are being made available and are being used in designated and nondesignated rural communities. We can provide you with the information to support this assessment.

Mrs. THOMPSON. I have some numbers that I think you will find of interest.

Senator COCHRAN. Yes, Madam Secretary.

Mrs. THOMPSON. Since the time of the designation of the empowerment zones and the enterprise communities, through last December, there have been \$324 million awarded from a variety of sources. And included in that is \$85 million from the private sector, where we used Federal dollars to leverage private sector dollars.

Since the inception of the program, we have had 18 new business revolving loan funds established, 3,000 residents have participated in job training. There have been six new job training centers established. And more than 7,700 residents are now being served by expanded child care or Head Start programs. So those are some of the things that we have been able to get accomplished.

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ADMINISTRATIVE COSTS

Senator COCHRAN. Let me ask you this one question about the budget request. I notice that in the area of administrative costs, last year's funding level was \$31 million. This year there is a \$4.6 million increase being proposed. Why is it necessary to increase the administrative costs over 10 percent in 1 year?

Mrs. THOMPSON. I believe it is technical assistance that we will be providing to the communities, but I want to ensure that that is where that money is going. It is for technical assistance. And one of the things that I think we knew before but which has been confirmed as a result of the processes that we have been going through is that some of the poorest rural communities have the greatest challenge in terms of writing grant applications and strategic plans for their communities and updating strategic plans.

And, as you know, it is very different—I know in my hometown, we do not have people working for the town of Larwell who have master's degrees in public administration, whose sole job it is to write grant applications in the private sector or the public sector. Instead, we have a lot of people who have day jobs and volunteer their time to serve the community as town board president and member of the town council.

Well, in the poorest rural communities, they have not an even greater need than in my hometown for the technical assistance information that we can provide and guidance that we can provide to link them up with Federal programs that are available. And that is the reason for the increase.

ALTERNATIVE AGRICULTURAL RESEARCH AND COMMERCIALIZATION CORPORATION

Senator COCHRAN. With respect to the Alternative Agricultural Research and Commercialization Corporation—that is a fancy, big title—or AARC, I am impressed with the work that is being done. I appreciate very much your making this material available to the committee—or to Senator Harkin, who made us all read it. [Laughter.]

But this is strong evidence, I think, of the importance of these investments in new technologies, new ideas, and new uses of products from the farms. I am hopeful that we can support your request for the additional funding. I know that amount sounds modest to you, but it is a small request for an increase. I hope we can do it, because I think it has been a worthwhile program, and we need to provide the funds to continue it and expand it if we can.

I know, in our State, we have the facility down at the University of Southern Mississippi that this committee funded several years ago, the Polymer Science Center. It has undertaken research in many of these same areas, trying to use products in a new way—developing polymers specifically—but there are a lot of spinoff discoveries from that research, or as a result of that research.

Have you been down there recently to check out what they are doing? Is that a complementary or a duplicative investment?

Mr. CRAIN. Mr. Chairman, we work very closely with Dr. Thames at the University of Southern Mississippi. I have been down there a couple of times. And it complements what we do. We rely on re-

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search laboratories like that one, and the ARS laboratories and the Forest Products Laboratory to develop those technologies. Then we can assist the entrepreneurs who are attempting to commercialize these technologies. We are the next step in the process.

As you know, down there, there is the revitalization of the tung oil industry. And we are excited about the possibility of getting involved in that, and assisting those people that are trying to develop biobased products from tung oil, that, as you know, was once very prominent in that area.

Senator COCHRAN. There was once a great hope that the kenaf industry was going to be an alternative source for pulp and paper products. Are you familiar with any new developments in the kenaf area?

Mr. CRAIN. Kenaf is something that we have invested heavily in—almost 10 percent of our portfolio is invested in kenaf, directly or indirectly. We feel like it is going to be the future. We have major paper companies now stating that they want to use up to 30 percent of their alternative fiber for the production of paper in the future. We are going to have to look at alternative fibers. And kenaf is a legal one, as opposed to some that are not, that we should pursue.

I think that a few months ago there were eight paper company executives from Japan that came to Mississippi, and told the Mississippi Department of Agriculture they would take up to 1 million metric tons of kenaf pulp tomorrow if they could get it.

Senator COCHRAN. Why can't they get it?

Mr. CRAIN. Well, there is not enough in the ground. And there has not been an incentive yet for the farmer to plant it and for a paper mill to be developed or a pulping mill to be developed, say, in the empowerment zone, right near Charleston, MS.

Hopefully, though, as we have more of these products become more commercially viable and the markets become penetrated, you are going to have more farmers in that region and in Texas and Arkansas and others looking at it. And when they do, you are going to see the big paper companies, whether they be domestic or foreign, come in and make investments to produce paper and other products from kenaf.

RURAL COMMUNITY ADVANCEMENT PROGRAM

Senator COCHRAN. I noticed the overall budget request for the Rural Community Advancement Program [RCAP] is \$2.5 billion in program-level dollars. How does this compare with last year's appropriated amount for these activities?

Mrs. THOMPSON. They are very similar. It is 10 percent. So it is very similar—well, it is 10 percent of budget authority—however that translates into the programs, whether they be grant or loan programs. But they are very similar.

Senator COCHRAN. My last question involves the local administration of these programs. I know the Washington level can devise and plan, have strategies and budget numbers, but unless you have the program administered in an effective way and a sensitive way at the State level and the local community level, it may not produce the results that we all had intended. What is your assessment of the quality of administration in the offices at the local level

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and how they are providing the resources and assistance, technical and otherwise, to the family farms and to the people who actually are the beneficiaries of these programs and services?

Mrs. THOMPSON. I think we have a very strong field delivery system, made up of career employees in the Department of Agriculture, who know very much about the needs in their own individual communities because they live, their kids go to school there and it is their community. And we have some very talented and very committed and, quite frankly, very, very knowledgeable people, whose heart and soul is in the community that they are serving.

And I think when you look at all of the changes that we have made in the restructuring and reorganization in the Department of Agriculture and all of the changes that they have been a part of implementing in program delivery, I just think that they have performed something close to miracles over the last several years. And I, personally, as a political appointee, am very proud to be associated with the field structure and the career employees that we have across the country.

And I, frankly, do not think there is any other way that we could administer these programs as cost effectively as we are administering them. I think the field structure is working very well.

Senator COCHRAN. The reason I ask the question is we want to be sure that the dollars we appropriate go to support the workers out in the field too, and not just the people who are here in Washington managing the program. Because if we have too many managers and not enough workers, we do not get any work done. We just do not get the services provided or the technical assistance out to the local level.

Mrs. THOMPSON. I could not agree with you more.

Senator COCHRAN. I want to be sure that we have a proper balance in our budget as well. So we are going to be looking closely at that. If you have any comments that you want to submit for the record, such as comparing the cost of administration and the dollars spent on the field services delivery system now with what it was 5 years ago, before the reorganization really started, that would be interesting to look at.

Mrs. THOMPSON. We can do that. As you know, we are requesting a lower level for salaries and expenses for fiscal year 1998 than for fiscal year 1997. Even with that, we are working hard to make sure that we are making the right kinds of investment in the resources that our field employees have available to them. And so there are some up-front costs in the reorganization and the restructuring that will be pretty much one-time costs. I am thinking in particular of the centralized servicing system for the single-family housing program.

But, yes; we would be glad to provide some good statistics regarding the costs over the last several years.

Senator COCHRAN. Thank you.

[The information follows:]

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COMPARISON OF ADMINISTRATIVE COSTS TO PROGRAM AMOUNTS DELIVERED FISCAL YEAR 1995 THROUGH FISCAL YEAR 1998

Fiscal year	Salaries and expenses	Program amount	Administrative cost per program dollar delivered
1995	\$555,238,000	\$6,463,145,000	\$0.09
1996	533,198,000	6,933,966,000	.08
1997	519,959,000	8,205,524,000	.06
1998	514,951,000	9,126,234,000	.05

The mission area has been able to lower the cost of program delivery by using a higher level of technology and through field restructuring. However, there are some initial start-up costs associated with the initiatives. Therefore, the budget request of \$514,951,000 is required to continue the momentum on these savings.

SUBMITTED QUESTIONS

Senator COCHRAN. I may have some additional questions, and other Senators who are members of the committee may also. If we do submit additional questions, we hope you will be able to answer them in a timely fashion. We will put them in the record and carefully consider them as a part of our process.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR COCHRAN

RURAL DEVELOPMENT

RURAL DEVELOPMENT LOAN FUND PROGRAM ACCOUNT

Question. The Administration's request proposes to change the direct loans authorized under the Rural Electrification Act. The proposal suggests using earnings generated by the interest differential on the voluntary cushion of credit payments made by Rural Utilities Service borrowers to provide loan subsidies for rural economic development direct loans. Please explain how this proposed request would work using monies from the Rural Electrification and Telecommunication Liquidating Account? How many rural economic development direct loans will be available in fiscal year 1998 if this request is approved by the Committee?

Answer. The earnings generated by the interest differential on the voluntary cushion of credit payments made by Rural Utilities Service borrowers would be used to finance the rural economic development loan and grant programs as authorized by the Rural Electrification Act. These earnings are currently being used to finance the rural economic development grant program. Some of the earnings would be transferred to the Rural Economic Development Loan Program Account from the Rural Electrification and Telecommunication Liquidating Account and used to provide the necessary loan subsidy for the loans. It is expected that the requested loan level of 25 million will provide for 79 loans.

RURAL BUSINESS-COOPERATIVE SERVICE

RURAL ECONOMIC DEVELOPMENT LOANS

Question. The fiscal year 1998 budget request proposes \$25 million, an increase of \$12.7 million, for rural economic development loans. The carryover of unfunded applications from fiscal year 1996 and fiscal year 1997 will total \$16 million by the end of fiscal year 1997. Will the proposed fiscal year 1998 budget request be sufficient to eliminate the backlog?

Answer. The carryover of unfunded loan applications for fiscal year 1996 was substantially eliminated in the first quarters of fiscal year 1997, a total of 20 loan applications for \$6.66 million had been funded under the Rural Economic Development Loan Program. As of April 1997, an additional 10 loan applications for \$3.2 million are currently being processed by Rural Development State Offices. The fiscal year

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1998 budget request of \$25 million is sufficient to cover any carryover of unfunded fiscal year 1997 loan applications and anticipated application activity. As you are aware, we are proposing to fund the loan program through earnings generated by the interest differential on the voluntary cushion of credit payments made by Rural Utilities Service borrowers. These earnings will be used to fund the \$5.97 million in subsidy for the proposed \$25 million supportable loan level proposed in the fiscal year 1998 budget request.

1890 LAND GRANT INITIATIVES

Question. The Rural Development 1890 Land Grant Initiative involves cooperative agreements with the 1890 Land Grant Universities and community-based organizations to develop income-producing projects for underdeveloped rural communities. What type of cooperative agreements are made with these universities and organizations?

Answer. The Rural Business-Cooperative Service agency has authority to enter into cooperative agreements with 1890 Land Grant Colleges and Universities. These cooperative agreements are for technical assistance and business development services in the local under-served communities where they are located. They assist current business owners, local business groups and budding entrepreneurs to maintain, expand and grow new businesses.

Question. Which 1890 Land Grant Universities are currently participating in this initiative?

Answer. The following is the list of all 1890 and Historically Black Colleges and Universities which are under cooperative agreements with Rural Business-Cooperative Service for fiscal year 1997 funded from fiscal year 1996 budget authority:

1890 Institutions:

1. North Carolina A&T University, North Carolina
2. South Carolina State University, South Carolina
3. Southern University, Louisiana
4. Prairie View A&M University, Texas
5. University of Maryland Eastern Shore, Maryland
6. Lincoln University, Nebraska
7. Langston University, Oklahoma
8. Kentucky State University, Kentucky
9. Fort Valley State College, Georgia
10. Florida A&M University, Florida
11. Delaware State University, Delaware
12. University of Arkansas Pine Bluff, Arkansas
13. Acorn State University, Mississippi
14. Tuskegee University, Alabama

Question. What is the history of this initiative?

Answer. The 1890 Land Grant Institution Initiative program was implemented as the result of USDA's commitment to work with these institutions as it does with the 1862 Land Grant Colleges and Universities to build capacity in the agricultural, mechanical, and technical arts areas. The Morrill Act of 1890 was enacted to provide federal assistance for Southern states for the education of African Americans. This initiative was initially implemented throughout the Department of Agriculture in fiscal year 1988. Rural Business Cooperative Service has participated in the program since fiscal year 1994 when USDA implemented its 1994 Reorganization. Prior to that, the original 1890's program was started under the old Farmer Home Administration (FmHA).

COOPERATIVES

Question. With the changing role in federal farm programs, the need for farmer cooperatives becomes increasingly important. In the fiscal year 1997 appropriations bill, the Subcommittee encouraged USDA efforts to support farmer cooperatives. Please outline the actions the agency has taken to strengthen existing cooperative development programs and what additional initiatives are planned to further encourage such cooperative self-help efforts?

Answer. The Department recognizes the important role that cooperatives continue to play for farmers, especially as they adjust to changing farm programs. We are focusing our resources in areas and activities that will support cooperative development in areas most affected by changing commodity programs and needs as expressed by producer groups. Our actions to strengthen existing cooperative programs include the following. First, we are maintaining a staff at the National Office level to conduct research, technical assistance and development of educational programs about cooperatives. The new increase for research on cooperatives proposed

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in our budget identifies the critical need for bolstering this work and continuing the partnership with colleges and universities in fulfilling it. Second, we are continuing to build a network of cooperative development specialists in State Offices who can work on specific projects as they are requested. These specialists coordinate with our staff at the National Office level as needed. We are also working through three additional programs to augment cooperative development assistance. The Rural Cooperative Development Grant Program is seeking to build a network of public/private development assistance. Under the Fund for Rural America, we are attempting to encourage farmers through their cooperatives to capture a greater share of the value added to their agricultural commodities. The National Sheep Industry Improvement Center Program, just underway, is attempting to address infrastructure needs to help mitigate the loss of the wool and mohair programs through industry-directed research, promotion, and technical assistance. Each of these efforts is aimed at conducting a program of research and education. This will help farmers have a clearer understanding of their options and strategies for using cooperatives as an alternative to Federal farm programs

SALARIES AND EXPENSES

Question. The President's fiscal year 1998 budget request proposes an increase of \$2 million for Rural Business-Cooperative Service salaries and expenses to fund cooperative research agreements primarily with colleges and universities on issues facing agricultural and non-agricultural cooperatives. Why are these additional funds needed and how will they be awarded?

Answer. Funds are needed to help rebuild the research base on agricultural cooperatives and to start building a research base on non-agricultural rural cooperatives. With diminishing resources for cooperative research the past few years, the base of information on which important decisions are made, by cooperatives themselves and by policy makers, has been eroded. In addition, we are seeking legislation which would expand the authority of Rural Business-Cooperative Service to provide the same type of advice and assistance to non-agricultural rural cooperatives as they are currently doing for agricultural cooperatives. Relevant research in this area is particularly lacking. If we are to provide timely and effective service to this new clientele, we need to start developing an information base through research when possible. Due to ceiling/staffing constraints, colleges and universities through cooperative research agreements will accomplish much of this research. This would be a competitive, matching program with funds allocated to those applicants with demonstrated ability to effectively carry out the needed research.

ALTERNATIVE AGRICULTURAL RESEARCH AND COMMERCIALIZATION CORPORATION

Question. In your prepared statement, it mentions that 66 projects have been funded in 32 states with an investment from AARC of \$28 million. Seven companies have begun to partially repay AARC. In the prepared statement you say that AARC does not expect the funded companies to generate positive cash flow until their fifth or sixth year. Will any of the remaining 59 projects mature to their fifth or sixth year in fiscal year 1997 and 1998?

Answer. The AARC Corporation's Board of Directors seeks to have a portfolio with companies at various levels of maturity. Thus, there should be a continuous flow of return into the Corporation's revolving fund, as opposed to periodic waves. The investments made in the earliest days of the Corporation—when it was called the Center—were primarily made in companies that were still in the Research and Development (R&D) phase of growth; the time of repayment was at least five to six years in the future. More recent investments have focused on companies that are in the pre-commercialization phase; the repayment horizon is shorter. As the portfolio grows and the mix of companies stabilizes, with an appropriate number running the gamut from those in the R&D phase to those in full production, there should be a constant number—probably two or three—per year reaching a positive financial position.

Question. What level of payments do you expect to receive from companies in fiscal year 1997 and 1998?

Answer. The current business plan, under which the Corporation is operating, anticipates relatively constant repayments of \$100,000 in each of fiscal year 1996 and fiscal year 1997. The business plan projects an increase in repayments to \$200,000 in fiscal year 1998. Major gain in repayments is not anticipated until fiscal year 1999. The business plan also takes into account an annual growth rate of approximately 4.3 percent in unrealized gains in value of AARC's stock holdings. Major equity options are eligible to be exercised beginning in fiscal years 1999 and 2000.

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Question. Section 729 of the 1996 Farm Bill includes a provision that allows Federal agencies to establish set-asides and preferences for products commercialized with the assistance of AARC. What sort of products will the Federal agencies be able to use?

Answer. Almost the entire portfolio of products could be utilized by the Federal government. For example, the U.S. Postal Service (USPS) is constructing “green” buildings around the country. One facility now being constructed near Dallas, Texas, will utilize compressed wheat straw walls produced by Agriboard Industries in nearby Electra, Texas. We believe other AARC-supported construction materials may also be used in that building.

The USPS has also contracted with Gridcore Systems International (GSI) to produce trash cans for use in post offices. The source of the raw materials used to make the strong, lightweight honeycomb panels for the trash cans is undeliverable bulk mail. We support the way the USPS has endorsed environmentally-friendly building products from the AARC Corporation. We are still talking with USPS about using other products in the AARC Corporation portfolio in their course of business.

Gridcore has supplied samples and is also talking with Unicor, part of the Prison Industries Program, about making furniture.

Discussions are currently underway with the Pentagon and several of the AARC building material suppliers to provide material to renovate and “green” the Pentagon. Use of AARC materials in this multi-year project could have a major positive impact on these companies.

Phenix BioComposites produces Environ from soybean meal and waste newspaper. It is a replacement for hardwood and looks like granite. The Natural Resources Defense Council (NRDC) used Environ for the counter tops and work surfaces in its new headquarters built last year, in Washington, DC.

PrimeBoard uses 100 percent wheat straw to produce Wheat Board, a particle board replacement. This product is being widely used for manufacturing cabinets, furniture, and millwork. NRDC’s counter underlayment is from PrimeBoard and its cabinets are also made from Wheat Board.

Seed-based Lubricants.—International Lubricants Inc. (ILI) produces a line of biodegradable seed-based lubricants—everything from transmission additives, to all purpose lubricants, to two-cycle oil to industrial lubricants. Although the seed-based lubricants are environmentally preferable, these petroleum replacements face stiff competition from the existing petroleum-based products. In spite of the competition, some sales to the U.S. Air Force have taken place. Vegetable oil based lubricants could also be used with weapons and in the engines of high-performance vehicles.

The Leahy-Wolf Company uses canola oil as a lubricant for concrete forms. As the Federal government continues to build new buildings and renovate old ones, or pours cement in environmentally-sensitive areas (bridges over waterways for instance), this product may be specified.

Other Fluids.—Windshield washer fluid produced by Aquinas Technologies that is made from ethanol would seem to be a natural for all vehicles.

Absorbents.—There are several products in the AARC portfolio which will help clean up oil spills. Low value wool from Hobbs Bonded Fibers has been purchased for use at military bases in Texas to catch and hold petroleum drips from vehicles. Two other products show great promise in remediating hydrocarbons. One is Oil Gator, the Product Services Marketing Group, which is made from cotton seed lint. It has been used to remediate spilled petroleum. Kenaf core can also be used to absorb and remediate hydrocarbons. These products can be used to clean up spills from existing contaminated sites, not just new spills. As military properties are being cleaned up, these products are likely to be considered.

Filter Material.—Scientific Ag Industries makes activated carbon made from peanut hulls. These products can be used in water and air filtration systems and can also be used to remediate soils. It’s also cheaper and of better quality than imported materials.

Soil Amendments.—Many military bases are located in places with poor soil conditions. Biorecycling Technologies, Inc. is currently working with the Marine Corps Ground Combat Center at Twenty Nine Palms, California, to improve soil conditions in the military housing area, the golf course, and recreation sites, using a variety of fertilizers and soil amendments derived from cow manure.

Earthgro Incorporated makes a variety of potting mixes utilizing plant and animal wastes. These can be used with interior potted plants and exterior plantings as an ideal substitute for peat, a finite and imported material, and petroleum-based fertilizers.

Cleaners.—The AARC Corporation has invested in a number of environmentally-friendly cleaning products. Interchem Environmental produces a line of solvents

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from soybeans including graffiti remover, paving equipment, tar remover, and cleaners for printing presses.

Shadow Lake makes Citra-Solv, a multi-purpose cleaner made from a powerful citrus extract, along with a number of other natural products—castile soap from essential oils and Air Scense, an air freshener from essential oils, which absorbs odors.

MM Manufacturing produces waterless hand cleaner from corn oil.

Tree-Free Paper.—KP Products uses kenaf, an annual fiber plant, to produce tree-free, chlorine-free paper.

Starch-based Plastics.—Several AARC-supported companies produce a variety of coatings and films from vegetable starch. For instance, StarchTech makes biodegradable packing peanuts, which replace similar petroleum-based products.

Forestry Materials.—Indian Creek Mesquite coats mesquite wood chunks with vegetable based paraffin in a “Light The Bag” application. No starter fluid is necessary. We can report that sales of this product are brisk in USDA’s employee-owned store located in the sub-basement of the South Building.

Cat Litter.—BioPlus Incorporated products biodegradable, flushable cat litter from peanut hulls. SSM Environmental Technologies Inc. uses corn stover, a post harvest residue, as its base to also produce an environmentally-friendly cat litter.

Question. Have any agencies established procedures for the purchase of these products?

Answer. No. USDA’s Procurement Policy Division is currently working to amend the Agricultural Acquisition Regulations (AGAR) to reflect the new procurement preference. Resource managers and contracting officers within USDA will be trained on using the AARC preference. At the same time, USDA procurement officials are working to present a case to amend the Federal Acquisition Regulations (FAR) which govern purchases by the entire Federal government. Ten years after companies are funded by the AARC Corporation, their procurement preference ends. The preference ends even for those companies that repay AARC ahead of schedule. The first group of companies was funded in 1993, therefore, only six years are left on their procurement preference.

RURAL HOUSING SERVICE

RURAL HOUSING SERVICE LOANS

Question. The fiscal year 1997 proposed subsidy rate proved to be too low for rural housing loans. Thus, the fiscal year 1997 budget authority proposal of \$1 billion for the section 502 program was inaccurate and in turn the actual program level for fiscal year 1997 was \$585 million. Interest rates have just been raised by the Federal Reserve. If these rates are in effect at the beginning of fiscal year 1998, how much lending authority will be available based on the fiscal year 1998 subsidy appropriation request of \$128 million?

Answer. If the April 14, 1997 Treasury discount rate of 7.19 percent is used to compute a new subsidy rate for the section 502 program, the result is a 16.51 percent subsidy rate. Based on the fiscal year 1998 budget authority of \$128.1 million and a new subsidy rate of 16.51 percent, the program level would be \$775.9 million. However, the forecasted rate of 6.16 percent is still the Administration’s assumption, and we anticipate a sufficient loan level in the 502 programs.

Question. Because of interest rate changes in the economy, the Secretary used monies from the Fund for Rural America to increase the fiscal year 1997 program level by \$141 million for section 502 direct single family housing loans. With the additional money allocated from the Fund for Rural America, how many loans will be made in fiscal year 1997?

Answer. With the additional money received from the Fund for Rural America, approximately 11,000 Section 502 Direct Single Family Housing loans will be made in fiscal year 1997.

Question. The budget indicates that the Administration has “increased its commitment to the mutual self help technical assistance grant program.” What does the agency mean by the statement “increased its commitment?”

Answer. In fiscal year 1996 there were 58 grants funded in a total of 26 States. The requests for technical assistance funding is ever increasing to help assist very low to low income families seeking affordable housing through the mutual self-help method. The requests for technical assistance in fiscal year 1997 far exceed our supply of funds, with 41 states requesting to fund over 113 grants. However, there were 26 other grant requests that totaled over \$4.4 million that we could not expect to fund. There is a tremendous demand for rural Americans to obtain housing through the self-help method and this demand is evident by the requests of non-profit organizations seeking technical assistance funds.

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Question. How much money has been earmarked for technical assistance from the appropriated fiscal year 1997 program level plus the monies from the Fund for Rural America?

Answer. There were \$26 million provided specifically for this program in fiscal year 1997. We believe this level will enable us to meet program goals and none of the Funds for Rural America are planned for this purpose.

Question. How much money is earmarked for technical assistance in the proposed fiscal year 1998 program level?

Answer. In fiscal year 1998, we planned to maintain the \$26 million program level under the rural housing assistance grant program.

Question. How many unsubsidized guaranteed single-family housing loans will be available from the fiscal year 1998 proposed program level of \$3 billion?

Answer. The fiscal year 1998 proposed program level of \$3 billion will provide approximately 42,360 guaranteed unsubsidized single-family loans.

Question. What is the status of the interim final regulations for section 515 housing loans?

Answer. The interim final rules have been submitted to the office of the Federal Register and we expect these regulations to be published on or about May 7, 1997.

Question. The fiscal year 1998 budget requests \$30 million for the program level and a subsidy level of \$10 million for housing repair direct loans. This is a decrease from the fiscal year 1997 program level of \$30.3 million and subsidy level of \$6.9 million. The Administration states that it is "essentially maintaining" the fiscal year 1997 levels and the proposed fiscal year 1998 level will enable the Rural Housing Service to provide assistance to 5,620 families. How many families will be assisted with the fiscal year 1997 appropriated levels?

Answer. Approximately 5,580 families will be assisted with fiscal year 1997 appropriated funds for Section 504 Housing Repair Loans. The subsidy level for fiscal year 1997 is \$11.081 million, not \$6.9 million, provides a loan level of \$30.251 million for fiscal year 1997. We have requested \$10.3 million in budget authority for fiscal year 1998 to have program authority of \$30 million, which is approximately the same loan level.

Question. How much of the proposed fiscal year 1998 budget request for direct farm labor housing loans and grants will be used for rehabilitation of existing USDA farm labor housing units?

Answer. The Agency has identified a need for approximately \$25 million in rehabilitation for older farm labor housing facilities. A review of the labor housing portfolio revealed that most health and safety needs have been met and the predominant need is for replacement of obsolete units and upgrading older complexes. The Agency estimates that \$5 to \$8 million will be needed from fiscal year 1998 funds for this purpose, the balance coming from loans and grants in subsequent years, internally generated reserve funds, and leveraged funds as repairs and replacement units are phased in over time to avoid tenant displacement.

RENTAL ASSISTANCE PROGRAM

Question. The Administration's request for fiscal year 1998 proposes \$593 million for the rental assistance program, an increase of \$69 million over the fiscal year 1997 level. The proposal states that during fiscal year 1998 the budget will provide \$52.5 million of rental assistance to replace 3,665 units of expiring section 8 units in section 515 projects and that this is a funding shift from HUD to USDA. The explanatory notes also state that RHS will not be able to provide any additional "servicing" rental assistance at the proposed program level. (Servicing rental assistance helps very poor communities to rent to people who receive rental assistance.) Is the proposal to use USDA rental assistance to replace expiring section 8 units "budget driven" or will it assist the Rural Housing Service to better satisfy the rental assistance renewal contracts for its customers? Does this proposal require authorizing language?

Answer. While this proposal will save the Federal government money, it was initiated to provide a more secure source of tenant subsidy for borrowers and very-low income tenants dependent on project based deep tenant subsidy, and reduce administrative burden and cost for the borrower, HUD and USDA.

USDA rental assistance (RA) is funded in five year increments, while HUD tenant subsidy is funded annually. The tenants, borrowers and RHS are all better served under a more reliable source of deep tenant subsidy. When the transition is made, borrowers will be subject to only one set of federal regulations. This will reduce operating burden and cost, and it will also allow more common sense approaches to project operations. In addition, replacing Section 8 rental assistance with RHS rental assistance will result in an overall cost savings for the government because the

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RHS rental assistance program uses a reimbursement structure based on project budgets to pay subsidy, which is different from the contract rent structure used by HUD, which includes automatic annual adjustments. For example, using RHS budget approval requirements will allow rents artificially inflated through automatic annual adjustments to be brought back down to reasonable levels.

Additionally, we have been advised that no change in authorizing language is needed to implement this proposal.

Question. How will the agency use the difference, \$6.8 million, after the \$52.5 million is used to replace the units of expiring section 8 in section 515 projects? Could this money be used for "servicing" rental assistance?

Answer. Once the 52.2 million is accounted for, that leave 16.8 million of the 69 million over the fiscal year 1997 level for RA. Any RA funds not needed to renew expiring USDA rental assistance or HUD Section 8 contracts could be used for servicing existing projects among other purposes such as new construction RA.

Question. Please explain in detail the Administration's proposal for the RHS to provide rental assistance to replace the expiring HUD section 8 contracts. Why did USDA, HUD, and OMB decide that USDA could best meet the needs of these projects?

Answer. After reviewing a number of options, USDA, HUD and OMB decided this approach offered the best combination of continued service to the public, reduction in subsidy cost, control of operating costs and reduction of administrative burden.

As Section 8 contracts expire, borrowers will be provided with USDA rental assistance contracts. To obtain rental assistance, borrowers will sign an RHS interest credit agreement which requires them to operate on a limited profit basis.

REDUCED GOVERNMENT COSTS/BUDGET AUTHORITY

The government will save money by eliminating Housing Assistance Program (HAP) contract requirements that create higher rents through "automatic" annual rent adjustments. RHS project rents increase only when RHS approves each project's operating costs using a zero based approach.

By 2005, all the Section 8 contracts in USDA projects would be converted to USDA RA contracts, provided that Congress accommodates the adjustments that need to be made in the 602(b) allocations for both the Agriculture, Rural Development, and Related Agencies and VA, HUD and Independent Agencies Subcommittees. For fiscal year 1998, the HUD allocation should be reduced by the amount it would cost to renew the expiring Section 8 contracts for one year, or \$20 million, while the amount allocated for USDA 5-year RA contracts should increase by \$52 million. While the net budget authority required for this conversion is greater in the near term, because 5-year RA contracts are replacing 1-year Section 8 contracts, after three years there are significant savings in the budget authority needed to maintain these units with RA. Net savings from the conversion of all 46,000 units would be an estimated \$291 million over eight years.

RHS RA is less expensive. Cost savings are due to the differing agency approaches for determining the amount of the contracts; rental subsidy upon their renewal. RA contracts are increased based on a determination of project costs. The HAP contracts are by law and regulation automatically increased through the application of HUD's Annual Adjustment Factor, which in past years led to rents in excess of the market rents for the area. As an example, the estimated cost over five years for one unit of Section 8 assistance USDA rental housing would be \$26,829. In contrast, the five-year cost of a USDA RA contract is estimated to be \$14,324. Therefore, over five years, renewing the 3,665 Section 8 units as RA would cost \$52 million versus \$98 million if renewed as Section 8 contracts, resulting in five-year savings of \$46 million.

Project operating costs will be reduced. Section 515 program borrowers with Section 8 units are currently subject to both HUD and USDA administrative requirements. Our analysis shows that management fees and expenses can be reduced by \$2 per unit per month by eliminating HUD administrative involvement in these projects. By 2005, savings to project owners/operators would be approximately \$1 million a year as a result of eliminating duplicative federal agency oversight. These cost savings would further reduce projects' rental assistance needs, because rental assistance is based on project operating costs.

Summary of cost savings:

There are two forms of savings, budget authority and outlays.

The conversion from section 8 to Rental Assistance results in a savings to HUD's fiscal year 1998 Budget and an increased cost to Agriculture's. The cost is made up of two elements, 1) Interest Credit, which is an "off-budget" cost that is paid out

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of the Rural Housing Insurance Fund; 2) Rental Assistance, which is an “on-budget” cost that must be appropriated currently.

Additionally, we are switching from one-year section 8 HAP contracts to five-year Rental Assistance contracts. This timing difference creates a cost up front that is recaptured over time.

The net savings to the government, including both interest credit and Rental Assistance (off and on-budget), on average, over a 10 year period amounts to \$25.4 million per year.

The net savings to the government from a budget authority standpoint total \$291 million from 1998 to 2005.

REDUCED ADMINISTRATIVE BURDEN

In addition to the significant cost savings, we see this proposal dramatically reducing the administrative burden on Section 8/515 borrowers and Agencies. Currently, borrowers must follow both RHS and HUD requirements, submit reports to both Agencies, and find ways to resolve conflicting requirements. If this proposal is implemented, borrowers will be subject to only RHS regulations.

The Federal government will also see its administrative burden reduced. HUD will no longer be required to regulate an entire category of Section 8 assistance, namely the Part 884 Section 8. RHS, HUD and borrowers will no longer be required to resolve frequent jurisdictional questions. No changes to RHS procedures should be needed to convert HUD Section 8 tenants to RHS RA. We anticipate that burden on tenants will not increase under this proposal. The only change tenants will see is that their certification will be completed on an RHS form.

Question. If this budget proposal is not included and section 8 contracts under rural rental assistance are not absorbed by RHS, will HUD then treat these contracts the same as all other section 8 contracts coming due?

Answer. We expect that HUD would treat these the same. RHS has an interest as the holder of the mortgage that these projects could fail if the contracts are not renewed or the contracts are replaced with vouchers or certificates. We would anticipate that any solution used by HUD will be more expensive in the long run than converting the subsidy to USDA rental assistance.

RHS would be concerned if tenants were required to convert to tenant based vouchers or certificates. Rural housing markets do not offer as many choices as urban and suburban markets. In many rural communities, Section 515 housing may not only be the most affordable and best maintained rental housing, but the only rental housing. In addition, many rural Public Housing Authorities (PHA's) who administer HUD vouchers and certificates do not have the delivery system to provide an appropriate level of service for rural residents to secure and administer vouchers or certificates.

If vouchers and certificates are not provided, existing tenants and projects will be forced into the non-subsidized housing market. Difficult non-subsidized market may force displaced tenants into sub-standard housing or homelessness. Borrowers will be placed in the impossible position of operating low income housing without being able to offer rents that eligible tenants can afford. Borrowers will simply not be able to operate their projects for the remaining thirty years of their fifty year loan.

We suggest that the solution must be “project based” to allow projects and tenants to at least retain their current position in the housing market. We feel that USDA rental assistance offers the best option in project based assistance.

RURAL HOUSING ASSISTANCE GRANTS (RHA GRANTS)

Question. The Administration's proposes to fund all the rural housing grant programs in one account. It also proposes that all obligated and unobligated balances available from prior years for all housing grants be rolled into this account. Please list all obligated and unobligated balances available from prior years for each housing grant program.

Answer. The requested appropriation language that would transfer both obligated and unobligated balances from prior years for all RHA grant programs from their current accounts to the RHA grant account would have no impact on grant making activity, it is only a change to simplify the accounting activities for carrying out these 6 RHS grant programs under one program account. This change would expedite the process of making funds available from recovered unobligated balances and would reduce the cost of and expedite the process of changing the computer systems. It would also reduce the administrative burden of reporting program account data to Treasury.

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Fiscal Year 1996 carryover for rural development programs

<i>Grant Programs</i>	<i>Budget authority carryover amount</i>
Sec. 504 very low-income housing repair grants	\$132,806
Sec. 504 very low-income housing repair grants, natural disaster	765,690
Sec. 523 mutual and self-help housing grants	9,872
Sec. 516 rural housing for domestic farm labor grants	64,125
Sec. 509 compensation for construction defects grants	1,894,376
Sec. 525/509 supervisory and technical assistance grants	1,731,394

Question. This proposal combines programs that are allocated by formula, like home repair grants, with programs that are allocated based on demand, like self-help housing and farm worker housing grants. Section 516 farm labor housing grants are not needed in all 50 states, yet the proposed Rural Housing Assistance Grant (RHAG) program would allocate the funds appropriated to this account across all 50 states. Please explain in detail how the agency will allocate these funds for each grant program included in RHAG.

Answer. RHS and the Administration anticipates providing flexibility on the state level between the 504 and Housing Preservation Grant Programs. This will allow state directors to meet the specific needs of rural communities. The Farm Labor grant activity is concentrated in certain agricultural states. This program works directly in conjunction with the Farm Labor Loan Program. The Administration anticipates that the funding will be administered from the National Office with flexibility provided to meet the need for these specific areas. Additionally, the Administration is moving forward to replace the current funding system of "first come-first serve" to a Notice of Funding Availability (NOFA) process. The Mutual Self Help Grant activity has expanded tremendously in the last few years across the rural America. The Administration anticipates to fund this program out of the National Office to ensure small communities and/or states with little or no activity have the opportunity to participate.

Question. Why don't more states, like Georgia and Alabama, that have a need for farm labor housing currently participate in this grant program?

Answer. The Agency has made specific strides through our technical assistance contractors to provide farm labor housing in underserved areas with demonstrated need. These efforts include working with local communities to develop sponsorships for farm labor housing. Additionally, the majority of Farm Labor grants are provided in conjunction with the Farm Labor loan program. The mixture of the loan and grant combination is limited to non-profits and governmental bodies. On-site farm labor projects where the farmer or owner provides farm labor housing through RHS is strictly limited to the loan program. Many states in the South have a history of on-site farm labor housing. We will continue to work with states such as Georgia and Alabama to ensure communities have the opportunity to provide needed farm labor housing.

RURAL HOUSING SERVICE

Question. What is the estimated number of Americans living in inadequate housing today?

Answer. In the December 1996 publication titled, The State of the Nation's Rural Housing in 1996, the Housing Assistance Council indicated seven percent of all rural households (2.5 million) and 8 percent of central city households (2.4 million) were in inadequate housing. This is compared to only 4 percent (1.2 million) of suburban households that were classified as inadequate.

Question. The President's 1998 budget request proposes an authorization of a \$100 million for graduating direct loan borrowers into the guaranteed program, at an appropriated subsidy cost of only \$20,000. What is the status of this legislative proposal?

Answer. The Department is in the final clearance process and we expect to transmit this legislative proposal to the appropriate Congressional Committees in the near future.

Question. How many estimated direct Section 502 borrowers would benefit from this proposal?

Answer. It is estimated that approximately 3,280 borrowers would benefit from this proposal based on refinancing an average loan balance of \$30,500. These borrowers can be generally characterized as nonsubsidized, high interest rate (10 to 13 percent) borrowers or borrowers who receive minimal subsidies but still pay above current market rates.

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SALARIES AND EXPENSES

Question. The prepared testimony states that the Rural Housing Service will have a savings of \$250 million because of the efficient changes brought about by automation and centralization. This savings will be a result of reduction in staff over five years. For the record, please provide the dollar and staff year savings by fiscal years (1996–2000).

Answer. I would be happy to provide that information for the record. However, I should point out that not all of the savings comes from a reduction in FTE's. The majority of the savings comes from mandatory accounts associated with reduced amounts of real estate taxes the agency has to voucher annually and reduced losses on defaults and foreclosures. I will submit a table outlining the estimated net savings for the years fiscal year 1996 through fiscal year 2000 which total \$249.2 million. This table reflects the original plan for the reduction of 220 FTE's on October 1 1996, followed by reductions of 300 on April 1, 1997 and 80 on October 1, 1997. This plan was not carried out because of the implementation of the voluntary separation authorized by the Appropriations Act for 1997, however the results are the same in terms of FTE reductions for fiscal year 1997.

[The information follows:]

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Question. For the record, please provide the staff years and savings associated with each of the seven phases of implementation for the conversion of the Rural Housing Service loan portfolio.

Answer. Regarding the second part of your question, I will submit for the record a table which shows the conversion to DLOS for each State in the seven conversion phases. The table reflects a planned total reduction in staffing of 888 FTE's which is a combination of the reductions attributable to DLOS and the reductions attributable to the revised streamlining targets established for Rural Development in the President's Budget. As you are aware the request for salaries and expenses reflects a reduction of \$15.5 million, in discretionary savings, associated with the implementation of DLOS.

[The information follows:]

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ESTIMATED/ACTUAL¹ FISCAL YEAR 1997 STATE FTE EMPLOYMENT BY MONTH

	FY 1996 EOY FTE empl	FY 1997 Sys												Rev. celling		
		Oct ¹	Nov ¹	Dec ¹	Jan ¹	Feb ¹	Mar ¹	Apr ¹	May	Jun	Jul	Aug	Sep		Projected	
																152
Alabama	181	179	175	166	164	161	161	2 160	152	152	152	152	152	152	161.2	159.5
Alaska	28	29	29	30	28	29	29	30	30	30	30	30	30	30	29.3	30.0
Arizona	85	82	82	79	77	77	75	2 74	72	72	72	72	72	72	75.9	75.5
Arkansas	199	198	197	182	177	176	177	173	2 169	165	165	165	165	165	177.3	174.8
California	171	168	166	161	158	156	155	154	153	2 153	153	153	153	153	157.3	159.2
Colorado	74	72	72	69	66	65	66	66	66	66	66	64	64	64	67.1	68.2
Delaware/Maryland	74	75	72	68	66	67	68	68	68	68	68	2 65	65	65	68.4	69.9
Florida	141	137	137	131	129	128	128	125	2 124	124	124	124	124	124	128.3	127.4
Georgia	204	198	196	184	178	176	174	2 170	170	170	170	170	170	170	177.7	175.8
Hawaii	60	60	59	58	58	58	58	59	59	59	59	59	59	59	58.6	58.8
Idaho	88	88	88	84	83	82	81	81	81	80	80	80	80	80	82.5	86.8
Illinois	158	156	156	149	148	149	148	146	146	145	145	145	145	145	148.5	150.4
Indiana	135	131	131	122	119	119	119	118	117	117	117	117	117	117	121.0	121.2
Iowa	162	161	161	154	148	146	145	142	2 142	142	143	144	145	145	148.0	150.2
Kansas	85	85	86	85	84	83	85	84	84	84	84	80	80	80	83.5	85.5
Kentucky	171	171	167	159	160	160	154	153	151	150	150	150	145	145	156.4	152.1
Louisiana	149	148	147	142	140	138	137	134	2 130	128	128	128	128	128	137.0	136.7
Louisiana	114	113	113	104	102	102	101	99	99	99	98	98	98	98	102.5	104.7
Maine	79	77	77	73	73	71	71	70	70	69	69	69	69	69	71.8	73.0
Massachusetts/Connecticut/Rhode Island	178	175	171	161	156	147	151	150	150	150	150	150	151	151	155.5	157.7
Michigan	132	131	130	131	129	129	126	126	126	126	125	125	125	125	127.6	130.6
Minnesota	345	344	342	323	314	314	312	312	311	310	2 284	257	258	258	311.2	291.8
Mississippi	193	191	187	177	174	171	2 169	167	169	169	171	173	175	177	175.1	175.7
Missouri	66	64	62	58	57	56	55	2 55	55	55	56	56	58	58	57.2	59.5
Montana	93	92	90	87	85	85	84	84	79	79	79	79	79	79	83.7	80.9
Nebraska	28	27	28	30	30	30	30	30	30	30	30	30	30	30	29.4	30.0
Nevada	68	66	66	66	64	64	64	64	64	63	63	63	63	63	63.9	65.0
New Jersey	70	70	68	70	70	68	65	65	64	64	64	62	62	62	66.2	66.1
New Mexico	157	154	152	142	139	138	135	134	134	134	134	2 134	135	135	139.2	143.0
New York	296	298	294	273	267	265	262	261	253	247	245	244	244	244	264.4	262.9
North Carolina	72	71	73	72	72	72	72	69	69	69	69	69	69	69	70.6	71.0
North Dakota	146	142	139	133	129	126	126	125	125	125	125	125	125	127	129.0	135.5
Ohio	134	133	133	118	117	116	113	111	110	110	110	110	110	110	116.4	116.0
Oklahoma	92	92	91	92	92	93	92	2 87	87	87	87	87	87	87	89.6	92.4

ESTIMATED/ACTUAL¹ FISCAL YEAR 1997 STATE FTE EMPLOYMENT BY MONTH—Continued

FY 1996 EOY FTE empl	Oct ¹	Nov ¹	Dec ¹	Jan ¹	Feb ¹	Mar ¹	Apr ¹	May	Jun	Jul	Aug	Sep	FY 1997 STs	
													Projected	Rev. ceiling
Pennsylvania	160	155	154	148	147	146	145	144	144	143	143	2 132	146.7	141.9
Puerto Rico	136	138	141	138	137	133	130	129	129	129	129	2 108	132.9	136.2
South Carolina	191	184	178	164	159	158	156	156	157	158	159	2 159	162.3	175.0
South Dakota	89	86	86	83	83	82	82	81	80	80	80	2 79	82.1	81.2
Tennessee	209	212	209	196	192	192	190	185	182	181	180	2 170	191.6	192.6
Texas	256	256	250	232	227	227	223	220	2 218	216	217	217	228.0	221.8
Utah	64	61	61	60	60	59	60	53	53	53	54	54	57.6	57.1
Vermont/New Hampshire/Virgin Islands	92	90	89	81	78	78	79	79	78	78	78	2 77	80.6	81.1
Virginia	181	178	176	153	145	143	2 142	126	130	133	137	141	145.7	146.18
Washington	91	87	84	83	82	81	79	79	80	81	82	83	81.5	86.4
West Virginia	106	103	101	101	101	101	100	99	99	99	99	2 95	100.2	105.2
Wisconsin	136	127	126	126	127	127	128	124	124	124	124	124	125.7	132.0
Wyoming	52	51	50	49	48	49	48	47	47	47	47	47	48.3	49.6
State total	6,194	6,108	6,046	5,746	5,639	5,590	5,483	5,440	5,424	5,384	5,352	5,298	5,614.6	5,644.0

¹ Actual data.
² Month of conversion.

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RURAL UTILITIES SERVICE

ELECTRIC AND TELECOMMUNICATIONS LOANS

Question. The fiscal year 1998 President's budget proposes an increase in direct electric loans. It states that the need for this increase is due to over two-thirds of Rural Utilities Service borrowers' electric distribution facilities having been in service for 50 years or more. How many RUS borrowers' electric distribution facilities have been in service for 50 years or more and where are they located? How many loans can be made at the fiscal year 1998 request level?

Answer. In the aggregate, the fiscal year 1998 requested electric loan levels are roughly equal to the fiscal year 1997 supportable levels. However, the fiscal year 1998 request would increase lending authority for direct hardship loans by \$56 million from the fiscal year 1997 supportable levels. The fiscal year 1998 request offsets the increase in hardship loan levels with a commensurate decrease in "municipal" rate lending from the fiscal year 1997 supportable levels.

Current information indicates that about 90 percent of USDA RUS borrowers have some distribution plant that is in the 40 to 50+ year age range. About 65 percent (1.3 million miles) of distribution line contains components of this vintage. These facilities are spread across most of the Nation's rural areas. The attached table shows how much of this plant is located in each state. The table is ranked by the percentage of the national total of this vintage plant located in the state.

The size of individual electric loans varies considerably depending on the amount particular borrowers request. At the funding level requested, the RUS would generally make loans to between 120 and 130 rural electric distribution borrowers.

[The information follows:]

MILES OF ENERGIZED LINE FOR ACTIVE BORROWERS

	1945 miles	1945 num ac- tive bor- rowers	Percent of 1995 miles of line	1955 miles	1955 num ac- tive bor- rowers	Percent of 1995 miles of line	1995 miles	1995 num ac- tive bor- rowers
AK	116	2	2	1,172	6	21	5,551	13
AL	11,010	22	19	35,213	24	60	58,498	24
AR	10,372	17	16	38,208	19	59	64,663	19
AZ	635	3	4	4,263	9	27	15,992	8
CA	1,538	4	42	2,585	5	71	3,638	3
CO	7,571	19	13	30,816	23	54	57,267	23
CT								
DE	1,047	1	25	2,005	1	48	4,161	1
FL	4,242	15	8	18,930	15	34	55,485	15
GA	21,928	42	18	60,727	41	49	123,253	41
HI								
IA	30,749	53	48	55,815	52	88	63,645	46
ID	3,176	9	26	6,339	9	53	12,041	9
IL	21,879	28	48	44,580	27	98	45,614	24
IN	23,094	44	52	34,690	41	79	44,132	33
KS	10,080	22	16	53,520	36	87	61,782	34
KY	315	25	18	47,504	27	61	78,341	28
LA	8,024	15	21	23,146	14	61	38,120	12
MA								
MD	8,747	2	68	5,642	2	44	12,843	2
ME	477	4	27	905	5	52	1,740	3
MI	9,928	13	35	18,200	15	65	28,130	13
MN	32,917	50	30	78,463	53	71	101,477	49
MO	23,253	39	21	82,260	46	75	110,062	46
MS	15,665	23	23	50,921	26	73	69,434	22
MT	3,424	14	8	26,767	25	60	44,495	25
NC	12,911	33	17	40,003	34	53	76,034	28
ND	3,431	7	5	51,838	25	78	66,657	26
NE	12,833	23	38	56,065	36	168	33,437	17
NH	1,414	1	31	2,491	2	54	4,616	1
NJ	415	2	67	561	2	90	622	1
NM	1,535	8	4	19,078	17	48	39,832	17
NV	121	2	3	165	2	4	4,223	4
NY	2,733	6	95	1,719	5	60	2,885	4
OH	19,400	28	52	29,178	30	78	37,491	24

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MILES OF ENERGIZED LINE FOR ACTIVE BORROWERS—Continued

	1945 miles	1945 num ac- tive bor- rowers	Percent of 1995 miles of line	1955 miles	1955 num ac- tive bor- rowers	Percent of 1995 miles of line	1995 miles	1995 num ac- tive bor- rowers
OK	15,676	23	17	59,668	27	65	91,675	26
OR	2,998	12	15	9,561	15	49	19,484	14
PA	10,400	13	40	16,252	13	62	26,068	13
PR				976	1	6	16,633	1
RI								
SC	11,351	23	19	31,211	24	52	59,451	22
SD	2,458	8	4	47,094	34	74	63,486	33
TN	12,358	30	17	42,928	28	58	74,122	25
TX	44,475	72	23	135,854	78	71	191,561	62
UT	754	4	13	1,822	5	32	5,773	5
VA	9,676	16	24	24,656	16	62	39,977	12
VI	52	1						
VT	1,190	3	41	1,844	3	64	2,870	3
WA	6,360	21	67	11,813	17	125	9,488	11
WI	16,604	32	43	29,880	31	77	39,052	26
WV	548	2	71	570	1	74	771	1
WY	2,439	12	9	13,314	15	51	26,091	12
US ¹	458,264	848	22	1,353,167	982	66	2,043,658	881

¹ Includes Puerto Rico and Virgin Islands.
Source: Annual Statistical Report, 1945, 1955, 1995.

Question. The explanatory notes state that the “Fiscal year 1998 budget request would also provide the Administrator the ability to move subsidy budget authority among the electric programs * * *.” Please explain how the President’s proposed request provides the Administrator this capability, and why this flexibility is needed.

Answer. The President’s fiscal year 1998 budget request specifically proposes that the Administrator of RUS have the authority to move subsidy budget authority (BA) among the three electric loan programs and among the three telecommunications loan programs. It does not propose moving BA from the Electric Program to the Telecommunications Program or vice versa.

In the Electric Program, those programs are the direct hardship, “municipal” rate and the guaranteed loans. In the Telecommunications Loan Program, they are the direct 5 percent (hardship) loans, the Cost of Money (Treasury Rate) loans and the guaranteed loans. The subsidy rate is considerably different for each of these programs and the demand for each of these programs varies from year to year. The ability to move budget authority among the different loan programs in each of the separate programs will allow us to vary the types and overall amounts of funding available consistent with demand while keeping the program cost constant.

Question. The fiscal year 1998 budget request proposes a decrease in direct telecommunication loans of \$35 million and an increase in the subsidy budget authority of \$375,000. The budget states that the “increase in projected subsidy rate for this program leads to the decrease in program level.” This results in 5 less loans available to be made in fiscal year 1998. The Agency has a reported fiscal year 1997 backlog of \$51 million in hardship loans and expects the amount to increase to \$98 million by the first of fiscal year 1998. Why is there an increase in the subsidy rate? Why is a decrease in the loan level being proposed when the backlog for direct 5 percent loans will only continue to grow?

Answer. Direct 5 percent telecommunication loan interest rates are set by law at 5 percent. The subsidy rate increased from 1.59 percent in fiscal year 1997 to 3.92 percent in the 1998 President’s Budget because interest rates increased from 1997 to 1998. It now costs the government more to subsidize these loans. The decrease in the loan level is a direct result of the increased subsidy rate. If the 1997 loan level of \$75,000,000 was maintained, the subsidy level for direct telecommunication loans would be \$2,940,000 calculated at the 3.92 percent subsidy rate.

Question. Are the fiscal year 1998 loan assumptions reflecting the actual interest rates currently projected?

Answer. The fiscal year 1998 subsidy rate for direct 5 percent telecommunication loans was based on the fiscal year 1998 President’s Budget economic assumptions.

Question. The Commerce Department’s National Telecommunications and Information Administration announced winners of grants in its 1996 Telecommunications and Information Assistance Program (TIAP) on September 19, 1996. Sixty-seven

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public institutions in 42 states were selected to receive \$18.6 million in federal matching grants. These grants are used to bring together public and private sectors to improve and strengthen communities using advanced telecommunications technologies. Please distinguish this program from the RUS telecommunications programs.

Answer. The NTIA TIAP for 1997 will focus on five areas: Community-Wide Networking; Education, Culture and Lifelong Learning; Health; Public and Community Services; and Public Safety. All awards are grants, and the money can be used for a wide variety of applications in all geographic areas. The USDA Distance Learning and Telemedicine Loan and Grant Program, focuses on different applications, different kinds of financial assistance, and applies solely to benefit rural residents. The USDA Distance Learning and Telemedicine Loan and Grant Program focuses on end-user equipment for interactive distance education, telehealth and training. The focus on end-user equipment complements the discounts in the Telecommunications Act of 1996 for telecommunications services used by all schools, libraries and rural health care providers. Those discounts do not include end-user equipment. The USDA Distance Learning and Telemedicine Loan and Grant Program provides a 100 percent grant, a combination loan and grant, or a 100 percent loan to help fund a program. Loans leverage budget authority tremendously, while grants are dollar for dollar. The grants are targeted to the most needy areas and loans to those providers who need assistance, but are more able to help pay from local or enterprise resources.

The USDA Distance Learning and Telemedicine Loan and Grant Program focuses on the sustainability of projects to both prove-out and prime the pump for the use of telecommunications to address special rural education and health care needs. Finally, the USDA Distance Learning and Telemedicine Loan and Grant Program is only available to benefit rural residents who are challenged by the task of providing services to areas separated by great distances, comprised of small towns, or facing geographically difficult terrain. The TIAP and the USDA Distance Learning and Telemedicine Loan and Grant Program complement each other.

Question. The fiscal year 1998 budget request proposes \$21 million for Distance Learning and Telemedicine grants. What is the backlog in funding requests versus available funding for the fiscal year 1997 appropriation?

Answer. Since RUS has not opened the application window for applicants to request fiscal year 1997 funding, no figures are available for actual fiscal year 1997 demand. However, past experience has shown that there is an overwhelming demand for distance learning and telemedicine grant funding. In fiscal year 1996 alone, where applicants only had a 45 day window in which to submit applications, and only grants were available, RUS received 150 financing requests totaling \$38 million—only \$7.5 million was available for the fiscal year. Since the first year in which the program had been funded, 1993, grant requests totaling more than \$262 million from 858 applicants have been received; the total available funding over this period was only \$35 million.

Question. Will the fiscal year 1997 allocations for RUS hardship loans, municipal rate loans, and loan guarantees be adequate until the end of fiscal year 1997? When will the fiscal year 1997 funding run out for each of these categories?

Answer. The fiscal year 1997 allocations for guaranteed electric loans will likely be adequate for requests in fiscal year 1997. However, the allocations for hardship and municipal rate electric loans will be exhausted by the end of the third quarter. We estimate a backlog of approximately \$800 million for this type of financing going into fiscal year 1998.

In the Telecommunications Program, loan levels for RUS cost of money loans, Rural Telephone Bank Loans, and RUS loan guarantees, \$300 million, \$176 million, and \$120 million, respectively, should be sufficient based on the number and amount of loan applications currently on hand. Regarding the Telecommunications Program's hardship loan program, a total of \$58 million in hardship loans have already been approved this fiscal year out of the \$75 million available. RUS currently has an additional \$57 million in processed hardship applications on hand.

RURAL TELEPHONE BANK

Question. In the prepared testimony, you state, Madam Under Secretary, that by the end of the fiscal year 1998 the Rural Telephone Bank (RTB) will have sufficient internally generated funds to fully retire the government's remaining \$574 million capitalization of the RTB. The Administration is working on legislation which would allow a fully private RTB to leverage its net worth in the private markets. What is the status of this legislation? Is passage of this legislation necessary to achieve privatization of the bank by the end of fiscal year 1998?

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Answer. The Office of Management and Budget has recently completed its review of the legislation and we are in the process of assessing their comments. We anticipate being able to transmit the package to Congress in the near future.

WATER 2000 INITIATIVE

Question. In the prepared statement, Madam Under Secretary, you state that the Rural Utilities Service will continue its commitment to the Water 2000 Initiative. What are the annual goals that the agency has met since the inception of this program?

Answer. Water 2000 focuses attention on the importance of safe drinking water to the overall public, economic and environmental health of rural areas. The goal of the Water 2000 initiative is to target the largest possible portion of the Federal investment in water projects to rural communities with the most serious quality and dependability needs. The RUS has not set aside a specific amount of funds from its regular Water and Waste Disposal programs appropriation to be used for Water 2000. However, the RUS has designated additional funds, such as the \$36 million transferred from the WIC program in fiscal year 1996 and, this year, using some dollars from the Fund for Rural America and Water and Waste Disposal National Reserve, specifically for Water 2000 projects. In fiscal year 1995 and fiscal year 1996, the RUS invested over \$351 million in poverty interest rate loans and \$195 million in associated grants for 535 projects that met the goals of Water 2000.

Question. What is the agency's long-term strategy for the Water 2000 Initiative, and how will it address the backlog of applications for water and waste disposal loans and grants totaling over \$4 billion?

Answer. The Agency's long-term strategy for the Water 2000 initiative and for addressing the backlog of water and waste applications will be based on the Strategic Plans prepared by all Rural Development State Directors, which set forth their goals and objectives through fiscal year 2002. The Strategic Plans assess the current needs and resources available in each State, and develop priorities based on that assessment.

Other components include these activities:

Develop better working partnerships with commercial lenders, state revolving loan funds, Community Development Block Grant funders and other sources of credit to attract more funding for rural water projects. This is happening actively in all states.

Utilize the Rural Community Assistance Program and State Rural Water Associations to identify potential Water 2000 projects and to help community groups develop feasible, efficient, cost effective projects.

Continue actively to promote a wide range of alternatives to drinking water problems including watershed protection measures, the use of individual and cluster wells, and multi-community regional approaches.

Train Rural Development field staff to work hand-in-hand with local groups to help them find both Federal and non Federal financing solutions for their water needs.

Streamline the Agency's regulations to allow easier access and to more effectively target resources toward the most needy communities. In fact, we anticipate that the streamlined Water and Waste loan and grant regulations will be published in the Federal Register by July 4.

Question. Madam Under Secretary, you state that over 80 percent of the budget authority proposed for RCAP for fiscal year 1998 is to support the water and waste disposal loan and grant programs. How does this compare to your Water 2000 initiative goals for fiscal year 1998?

Answer. The proposed fiscal year 1998 funding for the water and waste disposal loan and grant programs will allow the Department to make measurable progress toward the central goal of Water 2000. The RUS will give priority for funding in fiscal year 1998 to water projects that meet the Water 2000 goal.

Question. The loan and grant regulations have provisions that allow a community to implement private well systems as a potable water source. In the Water 2000 action plans submitted from the regional offices to Headquarters contains very few, if any, projects that have a recommendation to implement private well systems. Are private well systems more cost effective than to build a public system in an area with scattered population? How is cost-effectiveness integrated into the decision making process to provide solutions?

Answer. Cost effectiveness is always a priority. It has been the RUS' experience that the reason communities develop or expand public water systems is in response to inadequate ground water quantity or unacceptable ground water quality. The RUS generally believes that if a private well can be constructed at a reasonable cost

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with a sufficient quantity and quality of water, individual private wells may be the best solution. However, if well water is contaminated or of an undependable quantity, public water systems such as those financed under the RUS program would be an option that many communities would want to explore. The RUS can and does finance public systems that use wells which serve individual residences or businesses or wells that serve small clusters of users. Water and Waste Disposal funds must be used to finance public facilities—facilities owned and maintained by a public body, non profit organization, or Indian tribe. Individual home owners, farmers and ranchers, and business owners, if eligible, could access other programs to develop or improve an individual well. We would not expect to see many public systems being developed using individual wells as source water because individual owners could likely operate and maintain individual wells more efficiently than public operators.

Question. How do the regional offices formulate their recommendations for potable water needs? Who was consulted and what is the criteria established to make the recommendation?

Answer. The Rural Development state offices administer the water and waste water programs in the field. State Offices do not formulate recommendations for potable water needs. State Offices have, on occasion, assessed the needs based on available information such as applications for RUS funding on hand and data from others that have such information. These cooperating sources have included state and local health, development and environmental agencies, and state Rural Water Association technicians.

Question. How does the agency certify that applicants for funding from the rural water financing programs are providing true information? Is this information investigated? If so, how?

Answer. The Rural Development field staffs that process water and waste water loan and grant applications review the data provided by applicants. The data provided by the applicants comes from public documents such as preliminary engineering reports, financial reports, etc. In addition, there are one or more public meetings held on each project. The RUS has staff engineers who evaluate the technical data and loan specialists who evaluate credit and other factors. Funding decisions for individual projects are based on a well-established priority scoring system that directs the funds to the most needy projects within a state. When an applicant for a rural-based project meets the statutory eligibility requirements for water and waste disposal funding and is unable to obtain commercial credit, then RUS can finance that facility (if it is modest in size and design). The more needy and less likely to qualify for other credit the communities, the more likely their project would be funded.

SALARIES AND EXPENSES

Question. The fiscal year 1998 budget request proposes an increase of \$4.5 million for salaries and expenses of the Rural Utilities Service (RUS) for the improvement of automated business services. Is the technology that the RUS is planning to use to update their services required to be compatible with the new technology that other agencies in USDA are planning to implement?

Answer. The requested \$4.5 million for improvement of the Rural Utilities Service (RUS) automated business services is part of an on-going effort to modernize the RUS loan accounting system. This effort started in fiscal year 1993 when the then Rural Electrification Agency (REA) conducted an Information Strategy Plan (ISP) to identify the business processes that required re-engineering and modernizing. The USDA reorganization necessitated a re-evaluation of the ISP which was accomplished in fiscal year 1995 by a team from the St. Louis Finance Office and Information Resources Management Division. The Study reconfirmed the need to modernize the RUS loan accounting system in providing management with the necessary data to make sound business decisions. The estimated cost of the modernization effort was approximately \$12 million dollars. The work was started in fiscal year 1996 with \$2.9 million dollars and is continuing in fiscal year 1997 with another \$1.4 million. The modernization effort for RUS is coordinated throughout the Rural Development Mission Area to ensure that what is being developed is compatible with effort within the mission area as well as the rest of USDA. The development is first re-engineering the business processes and then considering Commercial-Off-The-Shelf (COTS) software before starting to code any in-house requirements. The Chief Financial Officer of USDA is being kept abreast of the on-going modernization, as is the Chief Information Officer.

Question. Have bids been solicited for this equipment and have any contracts been signed?

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Answer. There is no equipment being solicited for the RUS modernization effort, at this point.

Question. When does RUS plan to have its field restructuring completed? Which areas in the field have completed restructuring and which areas have not begun?

Answer. The field office restructuring process for Rural Development Agencies should be substantially complete by the end of this fiscal year.

UNIVERSAL SERVICE

Question. The Federal Communications Commission is currently promulgating the regulations for the 1996 Telecommunications Act which proposes to shift universal service support for rural telephone systems from the basis of historic costs to some type of forward-looking costs. Will the FCC's action of using forward looking costs undermine the RUS telephone borrower's loan portfolio? Can RUS telephone borrowers repay their loans if the FCC adopts this formula change? How has the 1996 Telecommunications Act affected the Rural Electrification Act's statutory responsibilities? Did the new telecom law modify or repeal any of the mandates of the Rural Electrification Act?

Answer. The Telecommunications Act of 1996 fundamentally changed the structure of the telecommunications industry in the United States. The Act, among other things, set the framework to move the local telephone market from a regulated monopoly structure to a competitive, deregulated structure. On May 8, 1997, the Federal Communications Commission (FCC) released its Report and Order on Universal Service. The FCC stated in the Order that "consistent with the Joint Board's recommendation, we find that a cost methodology based on forward-looking economic cost should be used to calculate the cost of providing universal service for high cost areas because it best reflects the cost of providing service in a competitive market for local exchange telephone service."

After determining that it would use competitively-neutral forward looking costs, the FCC examined computer models which model sponsors postulated could accurately predict the cost of serving any high costs areas. After an extensive comment period, the FCC determined that none of the models presented could accurately predict the cost of providing rural service. Consistent with the comments of the RUS, and others, the FCC postponed the implementation of the use of the model until January 1, 1999, for "non-rural companies" that serve rural areas, and until at least 2001 for "rural companies" that serve rural areas. It is too early to tell if the FCC can find a model or models that can accurately calculate the cost to serve rural areas, or how that will effect rural companies. It is clear, in any case, that as of now the FCC has not yet found a model that can accurately predict rural costs.

Support for rural companies, of course, comes from many sources, including the Federal Universal Service Fund, state universal service funds, access charges and state public utility commission policies. The income of RUS borrowers will be affected by changing policies with regard to each of these mechanisms. For example, on average, under the old system, RUS borrowers received over 55 percent of their gross income from access charges and a little over 10 percent from universal service funds. Whether any RUS borrower can meet its RUS debt service under the changes mandated by the Act, implemented by the FCC, state legislatures and state PUC's and, of course, the newly competitive marketplace, will depend on a myriad of factors which will vary from state to state. What is clear, however, is that at this time most rural companies are in good financial shape.

Therefore, barring significant changes in the totality of Federal and State universal service support, Federal and State access charges, long distance calling patterns, local revenues, the ability to compete, and state legislative changes, RUS borrowers, on average, should continue to meet debt obligations. Nonetheless, the RUS has instituted a Task Force to review all issues relating to lending policies and loan security. The RUS is also advocating Federal and State regulatory policies to help ensure sufficient support for rural telecommunications. The RUS wants to ensure that it will bring the most benefits to rural residents into the future.

The Act, and the resulting changes in the telecommunications market and regulatory structure, has, of course, affected the RUS Telecommunications Program. The RE Act contemplates a monopoly structure and prohibits the Department of Agriculture (USDA) from lending to duplicate service. Today's telecommunications market encourages competition and the duplication of carriers and types of service, i.e., wireline, wireless and satellite. In areas served by "rural companies," state public utilities commissions will regulate the type and extent of competition, using a public interest test. Also, the Federal Universal Service support is portable to new, competitive, universal service providers. The RUS Task Force is examining this issue as well. Regarding the preemption by the Telecommunications Act of 1996, the RUS

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has no current belief that the Telecommunications Act modifies or repeals any section of the RE Act.

Question. RUS has proposed a rule which rations available credit in the concurrent Cost-of-Money and Rural Telephone Bank loan programs by limiting the amount of funds loaned to a single borrower. The agency has failed to meet the minimum loan levels prescribed by Congress in each of these loan programs in fiscal year 1996 and may not meet them in fiscal year 1997. What is the justification for such a proposal? Please cite the specific provision of the authorizing act which would give the agency authority to make loans for less than the full amount applied for when the application is for authorized act purposes.

Answer. From fiscal year 1991 through 1995, RUS had an average backlog of \$55 million for telecommunications loans. If the 10 percent limitation had been in place during that period, the backlog would have been negligible. In past years, several borrowers have submitted loan applications of over \$100 million each. Because the size of the construction projects for these borrowers would not have exceeded the funds requested over the 5-year forecast period, about one half of these funds would have been just a line-of-credit and other borrowers would have been delayed in receiving funding. At the current level of funding the 10-percent limitation would equate to a concurrent loan of \$48 million. Because the average size of an RUS loan has been about \$9 million, the 10-percent limitation will impact only a small segment of the borrowers, will make funding available to a larger number of rural areas per fiscal year, and will have no adverse impact on building rural infrastructure.

The limited requests for loans in fiscal years 1996 and 1997, can be attributed to the uncertainty in the industry on support mechanisms caused by the Telecom Act of 1996. After more information is available on the FCC universal service proceedings, we expect to see an increase in loan requests that will exceed available funds.

RURAL DEVELOPMENT

RURAL COMMUNITY ADVANCEMENT PROGRAM

Question. The President's fiscal year 1998 budget request proposes a program level of \$209 million for direct community facility loans which is an increase of \$72.5 million. The Explanatory Notes state that 300 applications totaling \$304 million are currently on hand. When were these applications received by the department? Is there any unobligated monies available from past fiscal years to fund these loans? If so, how much is on hand, by fiscal year, and how many applications will be funded?

Answer. The majority of these applications were received by the Department during the past fiscal year, although a few were received prior to that. Applications may be submitted at any time during the year, and are prioritized as they are received. Applications on hand at the end of the fiscal year are not withdrawn, but remain active for funding consideration during the next fiscal year. All funds authorized during the previous fiscal years have been obligated.

Question. Is the Department currently receiving new applications?

Answer. The Department receives new applications throughout the fiscal year.

Question. What is the backlog of applications?

Answer. There are nearly 300 applications on hand totaling \$304 million.

Question. How many loans will be funded with the fiscal year 1998 request?

Answer. We expect to fund approximately 315 loans with the fiscal year 1998 request. The average size of our loans has been decreasing in recent years as we have been emphasizing the need to leverage funds from other sources. This has allowed us to stretch our scarce resources to serve more needy rural communities.

Question. The budget requests an earmark for direct community facility loan budget authority, community facility grant budget authority, and for guaranteed business and industry loan budget authority for fiscal year 1998 totaling \$2.5 million for the Empowerment Zone and Enterprise Community Program. Will this money be distributed to the State Directors? If so, how will it be distributed since it is earmarked?

Answer. Earmarked funds are retained in a reserve account controlled by the National Office and are allocated to States on a project by project basis. State Directors are responsible for reviewing applications to determine if the project is specifically identified in the EZ/EC strategic Plan and approved benchmark documents. Requests for funds are sent to the appropriate Division in the National Office in the same manner as requesting reserve funds for regular programs. The priority/selection scoring criteria outlined in application regulations are addressed and forwarded along with funding requests. Projects are ranked based upon scores and funded accordingly.

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The appropriate Divisions send these requests to the Office of Community Development for review, comment, and coordination.

Question. The explanatory notes state that the USDA Rural Development State Offices completed a Needs Assessment that shows rural water needs of about \$10 billion. Would you please expound on this assessment. Did all 50 states participate in this assessment?

Answer. The Rural Utilities Service coordinated this assessment through the USDA Rural Development State offices in the second half of 1995. State office Rural Development personnel worked with representatives from county and local governments, the Rural Community Assistance Program network, the State Rural Water Association network, other Federal agencies, State public health and other State agencies, and other groups as appropriate to complete the assessment. The results indicated that just over 3 million rural households have drinking water improvement needs of approximately \$10 billion. All 50 States participated in the assessment, which used the requirements of the State Drinking Water Act as the basic standard of estimating need.

Question. The President's fiscal year 1998 budget request proposes a decrease in the program level funding for direct water and waste disposal loans. The fiscal year 1997 level was \$739 million and the fiscal year 1998 proposed level is \$734 million. The subsidy appropriation for these loans increases under the proposed request from \$66.7 million in fiscal year 1997 to \$71.6 million in fiscal year 1998. How many loans can be funded in each of fiscal years 1997 and 1998 at these proposed levels?

Answer. In fiscal year 1997, the RUS estimates that 1,068 direct loans can be made at the current estimated program level. The fiscal year 1998 estimate is 1,034 direct loans. However, as with the Rural Utilities Assistance Program of 1996 and 1997, the Rural Community Advancement Program provides funding flexibility between the Water and Waste Grant and Loan programs. Also up to 25 percent within a State's allocation can be transferred between program areas within RCAP. Further, the matching and mandatory grants to States must be used for RCAP program purposes, so the loan level will very likely be enhanced above the amount currently projected if States have a priority need for direct water and waste loans.

Question. Given the need, why does the fiscal year 1998 budget propose a decrease below the fiscal year 1997 program level?

Answer. The decrease in water and waste program levels is due primarily to designating a portion of the Water and Wastewater Program monies for matching and mandatory grants for state governments as required under the Rural Community Advancement Program. If total RCAP funding for fiscal year 1998 were compared to program funding in fiscal year 1997, there is, in fact, an increase in BA and program level. Comparable figures are:

Fiscal year 1997 RCAP funding: BA \$636 million with program level of \$2.249 billion.

Fiscal year 1998 RCAP funding: BA \$688 million with a program level of \$2.494 billion.

Question. The fiscal year 1998 budget request proposes a decrease for the circuit rider program from the fiscal year 1997 level of \$5.2 million to \$5.15 million. Why does the Administration propose a decrease in this very important technical assistance program? What other means does the agency have to provide technical assistance to small communities?

Answer. Mr. Chairman, we believe our current request will help us fulfill those program objectives, yet appropriately reflects the fiscal restraint required of all government programs today. The circuit rider program provides an invaluable service to small communities, and saves the government significant sums as well. The technical assistance rendered through the circuit rider program enhances the life of the water and waste water treatment systems and means that the Federal government will not have to finance the replacement of these systems as frequently.

Besides the circuit rider program, our staff is also able to provide some technical assistance.

Question. The Administration has proposed no increase in fiscal year 1998 for direct business and industry loans. The subsidy budget authority does not need to be appropriated since the borrower interest rate has changed to a rate equal to prime, producing a negative subsidy rate. Would you please explain why the Administration proposes no increase and the effects of a negative subsidy rate.

Answer. The Administration believes \$50 million is an appropriate loan level for the direct Business and Industry program. It is a relatively new program which will be targeted to persistent poverty program areas. Once the program is operational and customers are more aware of the program, the Administration will review the program and propose funding levels consistent with demand and other priorities.

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Question. For the guaranteed business and industry loans, the fiscal year 1998 budget request proposes a decrease of \$77 million. The fiscal year 1997 program level was funded at \$688 million and the fiscal year 1998 proposed program level is \$610 million. There is a proposed decrease in the subsidy appropriation also. The fiscal year 1997 subsidy level was funded at \$6.4 million and the proposed fiscal year 1998 level is \$5.9 million. How many loans will be made at the level proposed for fiscal year 1998 versus that proposed for fiscal year 1997?

Answer. The average guaranteed loan in fiscal year 1996 was \$1.14 million. If the average loan size remains constant, then 603 loans would be made in fiscal year 1997 and 535 in fiscal year 1998.

Question. With no change in the proposed fiscal year 1998 funding level for direct loans and a decrease for the guaranteed loans, should the committee be of the opinion that there will be less of a demand for guaranteed loans in the future?

Answer. The President's budget assumes a fairly consistent level of demand between 97 and 98. Assistance is available to states for business assistance through the grants to states as well as the rural business and cooperative development funding stream.

Question. Why does the Administration propose to not fund rural business opportunity grants for fiscal year 1998? How many applications for these grants does the agency have on hand? Is the available funding adequate to meet this demand?

Answer. Although specific funding is not requested for the rural business opportunity grants, it would be an eligible purpose for funding appropriated to the rural business and cooperative development funding stream, allowing State Directors to provide these grants in those cases where it is a priority. In addition, the regulations for the program will not be published until later in the fiscal year and under the terms of the Rural Business Assistance Program, we have the authority to shift funds from other business programs into this account if needed. We have no applications on hand, as of yet, because the regulations have not been published.

Question. In your prepared statement, Madam Under Secretary, you state that the agency will be able to track the expenditures for RCAP. Please describe the tracking system that the agency has developed. How will the Rural Development Agency inform the Committee of the amounts of funding transferred within RCAP?

Answer. Mr. Chairman, the system simply reflects each program under RCAP and the applicable budget authority and permits the State Director and the appropriate Administrator(s) simultaneously to see the effects of the proposed transfer on each program, both within the State and at the National cap of 10 percent. If the transfer were to be agreed upon, the State Director would still be required to submit a written transfer request to be signed by the appropriate Administrator(s). Hence, transfers could be summarized by program and by state. That information could be made available to the committee on a regular basis as frequently as desired.

QUESTIONS SUBMITTED BY SENATOR STEVENS

RURAL DEVELOPMENT

FUND FOR RURAL AMERICA

Question. The Fund for Rural America is intended to improve economic stability and quality of life in rural America, as well as improve the competitiveness of the U.S. agriculture and forestry industry sectors. I understand that of the \$100,000,000 made available under this program, some funds are intended to establish Centers to administer this new initiative. Have locations for these Centers been decided?

Answer. Senator Stevens, the part of the Fund for Rural America to which you speak is within the jurisdiction of the Under Secretary for Research, Education and Extension, but I understand the centers will not be established until the grant awards are announced.

Question. Are you considering the needs of Alaska?

Answer. The Congressional and Departmental guidelines for the fund for Rural America will insure that Alaska's needs are considered. The Fund focuses on practical problem solving by research, education, and extension teams working across institutions and disciplines in areas faced with the greatest agricultural, environmental, and rural development challenges. Alaska clearly faces serious challenges in all of these areas. Moreover, Alaskan institutions have submitted 10 applications for Planning Grants, several of which cross traditional disciplinary and institutional lines. These applications will be considered by panels of peer experts in May and June as part of the Fund decision-making process.

However, awards will ultimately be made on a merit basis that looks across all of the 425 Planning Grant proposals submitted. Hence, it would be premature to

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conclude that Alaskan institutions will or will not win grant support. Award decisions will be announced in late June or early July. If proposals are not selected for support, each of the principal investigators will receive an explanation of the process, copies of the materials developed during the review, and information on similar projects that were selected for funding and will share project results.

Question. The University of Alaska has applied for a grant to locate one of the program's Centers in Alaska. Would such a Center assist rural Alaskans improve their dire sanitation, water supply, energy, high unemployment and economic development circumstances?

Answer. Several Alaskan institutions have submitted proposals that address the concerns you raise. The concerns are at the core of the Fund's mandate to enhance rural economies and improve the quality of life in rural communities. Hence, if funded, an Alaskan Rural Development Center would be expected to focus on these issues. As noted in the previous question, however it would be premature to conclude that the University of Alaska proposals or any of the other Alaskan proposals will be funded until after the merit review of all the applications submitted is completed.

RURAL BUSINESS-COOPERATIVE SERVICE

RURAL BUSINESS ENTERPRISES

Question. Last year the Committee provided an appropriation of \$53,750,000 for the Rural Business-Cooperative Program for activities supporting rural business enterprises. This program is particularly important to Alaska's timber dependent communities as they struggle to adjust to the loss of timber supply from federal lands. The Committee included report language last year encouraging consideration of the needs of our Alaska Villages initiative and the community of Thorne Bay, Alaska. What is the status their grant requests?

Answer. RBEG applications were received for both of these projects and were forwarded by the State to the National Office for funding from the National Office reserve. These projects will compete with other projects on the National Office reserve list for the next funding cycle, which is scheduled to occur sometime after pooling on July 11, 1997.

QUESTIONS SUBMITTED BY SENATOR BUMPERS

RURAL DEVELOPMENT

THE FUND FOR RURAL AMERICA

Question. The 1996 Farm Bill provided the Secretary authority to expend \$100 million on a number of programs at his discretion. Can you provide a list of actual program awards that have been made using this fund? Please explain why you think the use of this fund for rural development programs has been more innovative than how this subcommittee might have allocated the funds. How do you intend to use the \$1 million allocated in the Fund for Rural America for technical assistance for enterprise communities and empowerment zones and will they be available on a competitive basis?

Answer. Senator Bumpers, a portion of the Fund for Rural America was used to augment the 1997 program level for single family housing loans. This was necessitated by the shortfall in program level caused by higher interest rates which were higher than anticipated when the 1997 budget was being developed. In this specific instance, individual projects cannot be identified because the funds were allocated to the States and commingled with the appropriated level. Other project decisions have not yet been made even though negotiations have been completed. However, I will provide for the record specific projects in distance learning and telemedicine grants, rural business enterprise grants, and water and waste disposal loans and grants.

[The information follows:]

DISTANCE LEARNING AWARDEES

Project	Amount	City/State
Hubbard Independent School Dist	\$249,492	Hubbard, TX
Amber State University	115,000	Ogden, UT
Sweet Grass County High School	319,906	Big Timber, MT
Delta Research Center	160,000	Portageville, MO

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DISTANCE LEARNING AWARDEES—Continued

Project	Amount	City/State
North Central School District	302,009	Rock Lake, ND
Merged Area (Education) V Community College Dist.	330,000	Fort Dodge, IA
Allen Parish School Board	330,000	Oberlin, LA
Educational Service Unit of Unit 5	330,000	Beatrice, NE
Hamilton-Jefferson Counties Regional Office of Education	330,000	Mt. Vernon, IL
Junior College Dist. of Jefferson County	330,000	Hillsboro, MO
Southeast Alabama Regional Planning and Development Commission.	330,000	Dothan, AL
Montgomery Community College	127,593	Troy, NC
Southwest Virginia Educations and Training Network	177,600	Abingdon, VA
Center for Rural Development	303,900	Somerset, KY
Middle Tennessee State University	300,000	Murfreesboro, TN
Regional Education Service Alliance	330,000	Shawboro, NC
Fayette County Board of Education	189,280	Fayette, AL

TELEMEDICINE AWARDEES

Project	Amount	City/State
Rapid City Regional Hosp.	\$330,000	Rapid City, SD
The Evangelic Lutheran Good Samaritan Society	330,000	Sioux Fall, SD (also serves ND)
Medcenter One Health	300,178	Bismarck, ND
St. Charles Medical Center	330,000	Bend, OR
Ohio State University	325,837	Athen, OH
University of South Carolina School of Medicine	329,200	Columbia, SC

RURAL BUSINESS ENTERPRISE GRANTS FUNDED FROM FUNDS FOR RURAL AMERICA

State/project	Amount	Community
AK: Kootznouwo, Inc	\$250,000	(No city listed) Angoon County
IL:		
Lincoln Land Community College	1,500,000	Springfield, Sangamon County
Prairie Hills Resource Conservation and Development, Inc.	300,000	Macomb, McDonough County
Two Rivers Council Foundation, Inc	48,500	Quincy, Adams County
Village of Lena	199,000	Lena, Stephenson County
Edgar County Board	100,000	Paris, Edgar County
ME: City of Lewiston	200,000	Lewiston, Androscoggin Cty
NJ: Borough of Buena	300,000	(No City Listed) Angoon County
ND: Mercer Oliver Economic Development	500,000	(No City Listed) Mercer County
ND: Tuttle Area Development Corporation	479,100	Tuttle, Kidder County
SC: South Carolina Healthcare Recruitment and Retention Centers.	900,000	Entity in Richland County. Projects can be located in Newberry, Allendale, Bamberg, and Florence Counties
SD: National Enterprise Development Center	98,400	Huron, Beadle County
UT: Wendover Town	500,000	Wendover, Tooele County
VA:		
Franklin County Commerce Center	475,000	Rocky Mount, Franklin County
Southside Trng Employment Placement, Inc	500,000	Farmville, Prince Edward

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RURAL UTILITIES SERVICE—WATER AND WASTE PROGRAM EARTH DAY PROJECTS [April 16, 1997]

State/project	National reserve funds		Rural dev. totals		State's allocated funds	
	Loan	Grant	Loan	Grant	Loan	Grant
AR:						
Perry (in Town)	\$166,300	\$6,800	\$961,000	\$1,674,000	\$794,700	\$1,667,200
Pangburn	145,600	266,400	146,737	266,400	1,137	.....
AZ:						
Maricopa Water Dist		100,000	.....	.....	.....	.....
Havasu Heights Dist		80,000	.....	.....	.....	.....
City of Eloy		800,000	318,000	800,000	318,000	.....
CA: Allensworth	114,540	506,250	114,540	506,250	.....	.....
IL: Ford Heights	500,000	500,000	1,500,000	1,258,000	1,000,000	758,000
KY: Nicholas County	247,000	247,000	247,000	247,000	.....	.....
LA:						
Town of Pollock	150,500	599,500	3,425,000	652,000	3,274,500	52,500
White Castle	230,000	.....	230,000	.....	.....	.....
Dequincy .....	.....	227,000	349,500	275,000	349,500	48,000
MD: Allegany (Old Town)	245,000	550,000	245,000	550,000	.....	.....
ME: Great Salt Bay	700,000	.....	700,000	.....	.....	.....
MI: Village of Benzonia	600,000	171,000	600,000	171,000	.....	.....
MN: Ormsby	250,000	.....	250,000	175,000	.....	175,000
MO: Reeds Spring .....	.....	72,200	.....	.....	.....	.....
MS:						
Harmony Water Assoc	1,144,000	1,400,000	1,144,000	1,400,000	.....	.....
Delta City	78,400	198,600	78,400	198,600	.....	.....
MT: Columbus	700,000	.....	2,064,000	.....	1,364,000	.....
NH: City of Berlin .....	.....	444,510	.....	1,500,000	.....	1,055,490
NJ: Elmer	449,383	.....	702,000	.....	252,617	.....
NM: Acoma Pueblo	375,000	1,125,000	375,000	1,125,000	.....	.....
PA:						
Shannock Valley General .....	.....	1,650,000	2,600,000	2,705,000	2,600,000	1,055,000
Otto Township .....	.....	1,650,000	3,665,000	2,299,000	3,665,000	649,000
TN:						
West Warren-Viola	597,000	300,000	597,000	398,000	.....	98,000
Calhoun Charleston	103,000	.....	103,000	.....	.....	.....
TX: Arroyo Water Supply	593,000	756,200	593,800	756,200	800	.....
UT: Leeds Town	160,000	495,000	160,000	495,000	.....	.....
VA:						
Wythe County—Ft Chiswell ..	1,260,600	.....	6,512,100	4,400,900	5,251,500	4,400,900
Henry Co.—Oak Level	1,282,840	1,036,200	1,282,840	1,036,200	.....	.....
WV: Reedsville	450,000	514,000	450,000	514,000	.....	.....

As you are aware the Act requires the funds to be expended through existing rural development programs which means the existing statutes and regulations apply to funding decisions. This, in addition to the decision of the Secretary to reduce the backlog of applications within these programs, limited the innovative nature of projects funded. We are, however, making \$1.7 million available from the FUND for value-added cooperative development projects for which there is no specific appropriation in fiscal year 1997. This is one area in which we hope to fund some innovative projects.

The \$1 million made available for technical assistance to empowerment zones/enterprise communities will also be innovative. In order to maximize the use of Federal dollars, we are negotiating agreements with private foundations which will inject some of their funds, along with ours, into a pool of funds which will be used for technical assistance. These funds will be available on a competitive basis.

Question. I note that some of the Fund for Rural America has been allocated to programs where there has been a decline from the expected program level (such as section 502 housing) and other programs where there is a backlog. Would you please provide this subcommittee a list of programs under the Rural Development mission area for which there is a backlog and indicate the level necessary to fund those applications?

Answer. In fiscal year 1996, RUS' Distance Learning and Telemedicine Grant Program received 150 financing requests totaling \$38 million—only \$7.5 million of funding was available for the fiscal year and that amount was provided to 29 appli-

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cants. This resulted in a backlog of applications totaling \$31.5 million. In January 1997, RUS received an additional \$6.5 million in funding authority from the Fund for Rural America. Utilizing those funds, RUS was able to approve an additional 23 financing requests, reducing the backlog to \$24 million for applications received in fiscal year 1996.

The RUS Telecommunications Loan Program has a backlog of \$57 million, all of which is for hardship loans.

The RUS Electric Program currently has a backlog of 98 applications totaling \$580 million.

The Water and Waste Program currently has on hand \$2.72 billion in loan applications and \$1.27 billion in grant applications. The RUS Water and Waste Disposal Program was allocated \$16,695,115 from the Fund for Rural America. Those monies have been used to help fund approximately 31 projects in 22 states.

RURAL HOUSING SERVICE

The Community Facilities Direct Loan Program has a backlog of applications on hand in the amount of \$304 million. We expect to fund approximately 290 loans in fiscal year 1997. However, new applications are received continuously throughout the fiscal year, and based on experience, we expect that the backlog will remain at its current level.

The single-family backlog is listed below as follows:

Program	Backlog of applications	Funding level
Sec. 502 direct SFH	35,000	\$1.75B
Sec. 504 housing repair grants	3,200	\$15M
Sec. 523 self-help housing	¹ 92	¹ 10.6M
Housing Credit Sales	(²)	52-70M

¹The Agency was unable to fund 23 grantees requesting \$4.5 million in fiscal year 1997. Sixty-nine grantees were funded for fiscal year 1997 at 75 percent of their request creating a balance, or backlog, of \$6.1 million. Therefore, the total backlog for funding Section 523 Self-Help Housing applications is \$10.6 million.

²There is no "backlog" of applications for credit sales; however, we average 1,500-2,000 properties in inventory.

RURAL UTILITIES SERVICE

ELECTRIC AND TELECOMMUNICATION LOANS

Question. RUS has initiated a plan to require rural electric borrowers to submit plans based on a four year period rather than the traditional two year period. What did this change do to demand for RUS financing?

Answer. In January 1995, RUS published regulations that allow distribution borrowers to submit loan applications covering a period of up to four years. The period covered by the application is determined by the borrower, up to a maximum of four years. The longer loan period was intended to reduce administrative costs to borrowers, to supplemental lenders, and to RUS of preparing and processing frequent loan applications.

The longer loan period has resulted in applications for larger loans. In fiscal year 1996, RUS used all its budget authority for municipal rate loans and hardship rate loans, approving 97 municipal rate loans (\$544,616,858) and 23 hardship rate loans (\$90,577,664).

At the end of fiscal year 1996, RUS had a backlog of 106 applications for municipal rate loans (\$709.0 million) and 28 applications for hardship rate loans (\$119.9 million). These carryover applications from fiscal year 1996 exceed the total budget authority for fiscal year 1997 (\$455,564,516 for municipal rate loans and \$68,785,578 for hardship rate loans). Additional applications have been received in fiscal year 1997.

Because of this backlog, RUS published interim final rules in February 1997 that allow the agency to process loans in two parts during a fiscal year when applications substantially exceed available funds. The first part of the loan is processed in its regular place in the queue. The second part will be automatically processed based on the same application documents as if it were received by RUS exactly two years later than the first part.

Because of the two-part loan processing, the queue for municipal rate and hardship rate loans is now about 8 months. A year ago the queues for municipal and hardship rate loans were 4 months and 9 months, respectively.

Question. What is the current status of the planning requirement?

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Answer. The borrower's construction planning requirement is based on the loan application periods selected by the borrower. A construction work plan in support of a loan application must cover a period at least as long as the period covered by the loan application.

The borrower's financial planning requirement is not affected by the loan application period. Borrower financial forecasts submitted in support of distribution loans cover a minimum period of ten years.

Question. Can you please respond to the continuing claims that rural electrification is a completed mission and not in need of further federal assistance?

Answer. The mission of the Electric Program is to ensure that rural customers continue to have access to reliable, reasonably priced electric service to enable a reasonable quality of life and the possibility of continued economic development. Serving rural areas costs more than serving urban or suburban areas and the RUS program provides some measure of assistance for universal electric service. Like universal service assistance in the telecommunications and transportation industries, the need to support a national basic infrastructure is still a challenge. The RUS program provides assistance, leverages both public and private funds and sets standards for this basic infrastructure in rural America.

Electric service in rural areas must be both reliable and reasonably priced. Today's technology places ever greater demands on rural electric systems. In addition to regular periodic maintenance, borrowers must continuously upgrade their systems to ensure that rural residents have access to the power needed to support their farms, industries, supermarkets, medical centers, and schools.

Electric bills reflect both the cost of generating power and the cost of lines to deliver the power. The entire industry is highly capital intensive, and economies of scale are a significant factor in the cost of serving electric consumers. Data from 1995 show that RUS borrowers serve only about 6 consumers per mile of line, compared with about 35 consumers per mile for investor owned systems.

Since virtually all RUS borrowers are cooperatives or other non-profits, their electric rates are based on the cost of service, with no profit component. Based on the cost of service, the relatively low consumer density translates directly into higher rates. Department of Energy data for 1995 show that the average residential rate for borrowers in 36 states is higher than the state average, even with RUS financing.

The high per consumer cost of electric lines in rural areas will persist even in a restructured industry. Rural economic development and the well being of rural residents depends on high quality and reasonable priced electricity. Without federal assistance and assurance, many rural areas may be left behind.

Question. Of electric power available in rural areas, what portion of the customer cost is associated with generation, transmission, distribution, and maintenance?

Answer. Customer cost depends on the costs of generating and delivering power. Both costs vary widely. Generating costs depend on the fuel source, plant characteristics such as age and size, and other factors. Transmission and distribution costs depend on consumer density and factors such as local geography and weather. An additional significant factor is state and local utility taxes associated with generation, transmission, and maintenance. These taxes vary widely across the country. Current consumer bills do not show a breakdown of these costs.

For CY 1995, the total costs reported by RUS borrowers were as follows:

<i>Distribution borrowers (\$1,000)</i>	
Cost of power	\$9,975,078
Distribution expense—operation	387,443
Distribution expense—maintenance	709,168
<i>Power supply borrowers (\$1,000)</i>	
Cost of power	\$5,758,350
Transmission	291,651
Distribution	14,673
Maintenance expense	528,840

Question. What is the current status of rural electric funds for fiscal year 1997?
Answer. For municipal rate loans, loan authority for fiscal year 1997 is \$455,564,516. As of April 24, 1997, RUS had approved 78 loans totaling \$397,559,000, with \$58,005,516 remaining. Eighty five applications are pending, totaling \$575,013,820.

For hardship rate loans, loan authority for fiscal year 1997 is \$68,785,578. As of April 24, 1997, RUS had approved 13 loans totaling \$45,435,000, with \$23,350,578 remaining. Twenty-one applications are pending, totaling \$86,697,900.

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For loan guarantees, loan authority for fiscal year 1997 is \$300,000,000. As of April 24, 1997, RUS had approved 6 loans totaling \$67,852,000, with \$232,148,000 remaining. Five applications are pending, totaling \$176,783,000. In addition, RUS guaranteed FFB loans totaling \$68,439,408 have been repriced or refinanced in fiscal year 1997.

RURAL HOUSING SERVICE

Question. The President's National Partnership for Home Ownership calls for a goal of 8 million homes by the year 2000. What is the projected federal cost to attain this goal?

Answer. It is not anticipated that the federal government will fund all 8 million homes for the President's National Partnership for Home Ownership. These homes will also be funded by other partnerships, such as, private lenders, state agencies, and non-profits. If Congress were to provide \$1 billion of funding in fiscal years 1998, 1999, and 2000 to the Section 502 Direct Single Family Housing loan program and \$3 billion in fiscal years 1998, 1999, and 2000 to the Section 502 Guaranteed Single Family Housing loan program, the Rural Housing Service would be able to assist 210,000 families with home ownership at a budget authority cost of \$475 million.

Question. I understand your agency has begun to use escrow accounts to help borrowers better manage their financial resources. How has the use of escrow accounts for rural housing borrowers effected the program in terms of savings, defaults, and other identified goals of this action?

Answer. The Agency is completing the conversion in seven phases. Beginning February 1, 1997, approximately 100,000 loans were converted and an equal amount is converted monthly until completion of the process in September of 1997. Therefore, it is too early to measure results as only approximately 200 borrowers are currently on escrow. This number will grow quickly as all new borrowers are required to escrow and it is estimated that 60-70 percent of the existing caseload (600,000 borrowers) will be on escrow by the end of fiscal year 1998. Savings will be substantial and will be realized from three main areas.

1. *Significant reductions in tax vouchers from program loan accounting funds.* Over the past 3 years the Agency has vouchered an average of \$50 million per year to pay overdue taxes. In many cases these vouchers were just to prevent a tax sale and not to pay all delinquent taxes owed.

2. *Uninsured losses.* This is estimated a figure that the Agency was never able to adequately capture under the old program loan accounting system. In the past these losses were buried in the foreclosure loss category. Force placed insurance should eliminate these losses.

3. *Reduced foreclosures.* Timely, consistent servicing, escrow and force placed insurance should greatly increase the Agency's ability to provide supervised credit to rural housing borrowers. With these new tools added to existing subsidy and moratorium authorities, the Agency is confident that the number of foreclosures will be reduced by at least 50 percent.

Question. The budget request includes \$52 million for HUD section 8 contracts. Why should this subcommittee be expected to help provide funding for HUD programs?

Answer. Over time, the Federal government will save money from replacing expiring Section 8 contracts in Section 515 projects with USDA rental assistance. RHS recommends this transfer if the Appropriations Committee is willing to increase the Agriculture Appropriation Sub Committee's Mark this year to allow these long term savings for the government.

Question. Can you identify any RHS programs we could reduce in order to provide the \$52 million for section 8?

Answer. If the \$52 million for the conversion of HUD section 8 HAP contracts to RHS RA contracts is not to be funded as requested in the President's Budget, the Administration would object to funding the conversion at the expense of other Rural Housing Programs. We have respectfully requested that the Congress make the necessary adjustments during its consideration of the fiscal year 1998 Budget Resolution, 602(b) allocations, and appropriations bills. The President's request will substantially reduce our future needs for total rental assistance funding and administrative costs.

SECTION 515 RENTAL ASSISTANCE

Question. I note the section 515 rental assistance increases by \$16.8 million to \$540.9 million? Does this include the assumption of HUD section 8 contracts?

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Answer. For the traditional Section 521 rental assistance grants, \$541 million is requested. That is \$16.8 million above the fiscal year 1997 enacted level and does not include the section 8 contracts. An additional \$52 million is requested above \$541 million for the conversion of the dual track Section 8/515 HAP contracts to Section 521 RAP contracts. The total request is \$593 million.

Question. Is this amount for both renewal of existing contracts as well as new commitments?

Answer. The funding request will address the renewal of 34,100 expiring RHS rental assistance units. In addition, the fiscal year 1998 request will fund new rental assistance units to be used in conjunction with rehabilitation new construction loans.

SECTION 502 HOUSING PROGRAM

Question. As you note, the program level for section 502 housing dropped from the projected \$1 billion to \$582 million due to increased interest rates. You imply that the increased budget authority in this account for fiscal year 1998 will still result in a \$1 billion program. However, already we have seen interest rates increase since submission of your budget request. Give current interest rates, what do you project the program level would be for section 502 housing at your requested level of budget authority?

Answer. Senator Bumpers, as I have testified, accurate estimates of long-term interest rates within this economy are very difficult to make. In mid March of 1997, I was very comfortable with the estimates because the rates at that time and those reflected in the budget were less than 50 basis points apart. As you note, we have recently seen the rates increased by the Federal Reserve Board, and now there is a difference of 100 basis points. If that difference remains in effect, the program level for 502 housing would drop to about \$750 million.

Question. Will you submit re-estimates nearer to enactment of the fiscal year 1998 appropriations bill in order to better coordinate budget authority with expected program levels?

Answer. While I do not anticipate the Administration will formally submit re-estimates of the subsidy rates, I will assure you that my staff will keep the subcommittee staff informed of the difference in rates and the resulting effects as frequently as the staff desires. However, the forecasted rates are the Administration's assumptions and we anticipate an appropriate loan level in the 502 program.

COMMUNITY FACILITIES PROGRAM

Question. You mention a number of types of projects, such as day care, fire protection, etc. that can be funded through your Communities Facilities program. What types of projects have communities identified as their highest demand in terms of program dollars and number of actual projects?

Answer. The following types of projects have been identified by communities as their highest demand in terms of program dollars and number of actual projects funded:

Purpose	Amount	Number
Health Care	\$1,956,000,000	2,282
Public service ¹	1,011,000,000	2,161
Public safety	476,000,000	2,880

¹Public service includes cultural, educational, energy, and transportation facilities, public buildings, and industrial sites.

RURAL BUSINESS AND COOPERATIVE SERVICE

BUSINESS AND INDUSTRY LOANS

Question. I have heard complaints from some states that the Business and Industry fund was pooled earlier than usual this year. When was the B&I account pooled this year? Was that the normal time for national pooling? If not, were states allowed the opportunity to obligate funds in a normal manner from obligations on hand? Was this action disruptive to states?

Answer. The pooling of the Business and Industry (B&I) Guaranteed Loan Program funds normally has been done in two stages, the first occurring in April and the second in August of each year. In an effort to give State Directors more flexibility as well as control over their allocation of guarantee authority, a decision, early in the fiscal year, was made to pool only once during fiscal year 1997. This was to

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occur on July 11, 1997. However, numerous States, through extensive outreach activities, depleted their B&I Guaranteed Loan Program allocation and requested funding from the National Office reserve, while several States had not obligated nor had application activity to utilize 50 percent of their allocation. National reserve funding was depleted, and a large demand from numerous States for National Office reserve funding continued, thus it was decided to conduct an early pooling of the B&I funds, which was done on March 10, 1997.

APPROPRIATE TECHNOLOGY TRANSFER FOR RURAL AREAS

Question. You mention that the ATTRA program received a record number of inquiries in fiscal year 1996. Would you please distinguish ATTRA activities from those of Extension?

Answer. The Appropriate Technology Transfer for Rural Areas (ATTRA) program serves as the central source for answering questions about and encouraging agricultural producers to adopt sustainable agricultural practices which allow them to maintain or improve profits, produce high quality food and reduce adverse impacts to the environment. ATTRA effectively combines the knowledge of the university system, the Extension Service, and other state and commercial entities into a single comprehensive center of expertise.

ATTRA offers a unique and complementary service to that provided by Extension, as illustrated by a continuing increase in the number of annual requests to ATTRA, from 4,000 annually in fiscal year 1989 to more than 18,000 in fiscal year 1996. Response by mail (more than 67 percent in less than a week) and, increasingly, by electronic means, offers farmers the convenience of receiving information on options and choices at home or on the farm. Because of its national scope, ATTRA staff more frequently access information on successful alternatives to conventional production methods for commodities, as well as a wider diversity and scale of enterprises, practices, and farmer experiences specifically related to sustainable agriculture. Through ATTRA, useful ideas and solutions can more easily cross state and agency lines, and can also include those developed and tested by innovative farmers and organizations. Through ATTRA caller surveys, farmers consider these kind of resources to be very important, and they value approaches which differ or add to the approaches taken by university-based research sources accessible to extension.

Question. What role is ATTRA playing in the overall goal of achieving a more sustainable agricultural base?

Answer. ATTRA combines the knowledge of the university system, the Extension Service, and the State and commercial entities into a single comprehensive center of expertise on sustainable agriculture practices.

Question. Is there anyway to document the role of ATTRA's role in environmental protection or assisting rural economies?

Answer. Over the last 12 months, 77 percent of the requests to ATTRA have pertained to production and management options which contribute to environmental protection. Farmer requests tallied in ATTRA's database include questions about: (a) reducing pesticide and other chemical use; (b) improving soil fertility with less environmental impact, especially on water quality; (c) diversifying crop and animal production in ways that diversify income sources; (d) meeting new markets created by greater numbers of consumers interested in food produced in more environmentally sound ways; and (e) keeping more of the income for the farm family by cutting costs and making greater use of local resources.

ATTRA maintains a database and other electronic and physical information files which track caller requests, background on their farm enterprises and staff responses, now numbering more than 100,000 as of March 1997. ATTRA is also currently analyzing hundreds of feedback surveys which describe how callers have put ATTRA's information to work.

During their calls to the national 800 line, reasons given for seeking out ATTRA include one or more of these motivating factors: Strong desire to continue making a living from agriculture, a priority on being good environmental stewards as well as good farmers, and the importance of contributing to the economic well-being and future of their local rural communities. When ATTRA staff interview callers, a majority of them (62 percent in a recent sample) say that they were not able to get their questions answered elsewhere.

ALTERNATIVE AGRICULTURAL RESEARCH AND COMMERCIALIZATION CORPORATION

PROJECT INVESTMENT REPAYMENTS

Question. You mention that AARC has begun receiving repayments from program participants. How much has been repaid?

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Answer. To date, the AARC Corporation has received \$82,700 in royalties, \$50,000 from the sale of stock.

Question. What kind of equity positions does AARC have with borrowers?

Answer. AARC-funded companies are not "borrowers" in the traditional sense of the word, i.e. someone with whom a loan has been arranged. Loans usually carry a set repayment schedule and a pre-determined rate of interest that is assessed as the price of borrowing the money. Although authorized to make loans under the enabling legislation that established the AARC Center (now AARC Corporation), the Corporation's Board of Directors has decided not to use that authority. Instead, the Corporation makes investments much as any private sector venture capital fund does. The major differences between AARC's approach and the private sector are that AARC is more patient about when it expects to see some return and, overall, the rate of return is less demanding than that generally required by the private sector. This is because social externalities beyond project economics are inherent considerations in AARC investment decisions. Investment preference is given to projects that benefit rural communities, are environmentally friendly, and open non traditional markets for farm and forest products. Private venture capital firms do not make allowances for such considerations. Nevertheless, when AARC assumes an equity position within a company, it does so in the same manner as any private investor would. In some situations AARC has taken common stock, in others AARC has taken its own class of preferred stock. At times, when it has made sense to the structure of an investment, AARC has taken warrants against the future purchase of stock. In all cases, the Board of Directors negotiates an exit strategy. Ideally, AARC would cash out its equity position when a company either went public, or was acquired. If neither happens, AARC always has a negotiated put option, whereby the company agrees to repurchase the stock by a pre-determined future date. The repurchase price is typically calculated on the basis of a formula tied to a multiple of the company's net sales for a period of time prior to the repurchase.

Question. Is there a maximum length of time AARC can hold equity positions?

Answer. There is no set period of time for which AARC can remain an equity investor in a company. However, absent an Initial Public Offering (IPO) or acquisition, the repurchase strategy described above is usually set to occur within six to eight years from the date of the investment.

Question. Does AARC intend to be self-sustaining at some point?

Answer. Under the provisions of the 1996 Farm Bill, AARC has prepared a business plan that shows a self-sustaining fund by the end of 2002.

QUESTIONS SUBMITTED BY SENATOR HARKIN

RURAL BUSINESS-COOPERATIVE SERVICE

BUSINESS AND INDUSTRY PROGRAMS

Question. Clearly, one of the biggest problems facing economic development in rural areas is capital. AARCC is crucial to providing venture capital for new nonfood products. But, we also need capital for a variety of economic ventures. And, for new mid sized companies, the B&I program is the only effective substantial USDA business capital assistance program that is available. Fortunately, it has proven to be both efficient and effective. Unfortunately, it is under funded. For this year, \$1 of BA provides for about \$93 in loan guarantees. We have had a reawakening of the B&I program over the past four years. Demand has been steadily rising since fiscal year 1994 and with the new provisions now in place, demand has been further increasing. Do you believe the B&I loan guarantee program has been crucial to generating job creating businesses in Rural America?

Answer. Yes, so far this fiscal year, the loan guarantees made under the B&I program have created 4,710 jobs and saved 7,873 jobs. For the past two years, 17,787 jobs were created and 23,276 were saved. In 1995, 8,076 jobs were created and 14,300 jobs saved. In 1996, 9,711 jobs were created and 18,976 saved.

Question. What is the current level of new loan requests that have been coming in to state offices over the past several months?

Answer. At the beginning of fiscal year 1997, there were 217 B&I applications and preapplications on hand totaling \$348,200,333 with an allocation of \$680 million. Currently, there are 455 B&I applications and preapplications on hand totaling \$779,540,930 with only \$247,245,145 of the funds, allocated through the Rural Business-Cooperative Assistance Program, not obligated.

Question. If there is not a request to have processing slow down or acquisition of new funds, when will the program run out of funds?

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Answer. There are requests for funds from the National Office reserve currently on hand totaling \$33.23 million, which cannot be met because the reserve is out of money. Nine States have already exhausted their allocation and, out of the remaining State Offices, only 4 States have enough funds remaining in their allocation to cover the applications and preapplications that have been filed. Unobligated B&I guaranteed funds are scheduled to be pooled on July 11. If processing continues at its current pace and additional funds are not made available, we estimate that we will have exhausted funds by mid-August.

Question. What options do you now see for shifting funds into this important program?

Answer. The program is funded under the Rural Business Cooperative Assistance Program (RBCAP) along with the Business and Industry Direct Loan, Rural Business Opportunity Grant, Rural Cooperative Development Grant, and Rural Business Enterprise Grant Programs. We are currently evaluating options to administratively transfer RBCAP budget authority set-asides for these programs to the B&I Guaranteed Loan Program.

Question. If the program was allowed to continue with normal approval timing of loan guarantees with a supplemental appropriation, what would be your estimate of the size of the loan guarantee program in fiscal year 1997?

Answer. If the demand for the Business and Industry Guaranteed Loan Program continues in a linear progression from the October 1, 1996, level of \$348,200,000 through the current level of \$779,540,930 as of April 22, 1997, it is estimated that the total demand for the program for fiscal year 1997 will be nearly \$1.6 billion. This estimate is based on the average daily increase in loan activity of \$2.1 million for the remaining 161 days in fiscal year 1997 minus the appropriated funds not obligated.

Question. What do you think the likely demand for the program would be in fiscal year 1998, if it were not restricted by budget limitations?

Answer. Following the same assumptions used in the previous answer of an average daily increase in loan activity of \$2.1 million plus the existing demand of \$779,540,930, we estimate the size of the program would be \$1.5 billion in fiscal year 1998 if unrestricted by budget limitations.

Question. For maintaining the integrity of the B&I loan portfolio, what kind of exceptions to authority, waivers, are there to standard policy? What kind of assistance to state directors is being provided to maximize the quality of the portfolio?

Answer. The Administrator has been delegated the authority, on individual cases, to grant an exception to any requirement or provision of regulations, which is not inconsistent with applicable statutes, where the application of the requirement or provision of the regulation would adversely affect USDA interests. Exception have been granted on individual projects where USDA's minority business outreach initiative would have been adversely impacted if the exceptions were not granted.

Training assistance has been provided and is available to Rural Development State personnel to maximize the quality of the portfolio. In addition, training material is being developed to assist State personnel in training certified or non-bank lenders that are new to the program. A "jump team" of qualified, experienced, field personnel has been identified to provide assistance to State Directors on processing and servicing situations as needed. We perform annual business programs assessment reviews on state office activities regarding the business programs including servicing and portfolio management. Also, RBS is developing loan portfolio improvement to management procedure for implementation. This will coordinate early warning systems into the existing activity performed by our Lenders, State Offices and National Office on servicing our portfolio. Currently our management and maintenance of our portfolio by the National Office Staff have allowed us to reduce our loan delinquency to 7.5 percent of the outstanding loan portfolio of \$1.5 billion.

COOPERATIVES

Question. What do you see as the biggest obstacle facing people out in the countryside who want to develop cooperatives?

Answer. Two major barriers that people face are organizational ability and the need for start-up financing. Understanding what a cooperative business is and how to approach the organization of cooperatives are obstacles that can be addressed through various types of educational and technical assistance. Often the most valuable assistance is helping people understand their roles as members (potential members) in organizing and operating the cooperative.

The other barrier, financing, relates to the development process and business start-up. Lack of readily accessible funds to carry out phases (a business plan, make financial projections, and legal structure) of the development process are often major

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obstacles to start-up groups. This is particularly true of many low resource groups who are exploring cooperative business structure.

Question. What is the biggest obstacle USDA faces as it attempts to promote cooperative development in the field?

Answer. The biggest obstacle USDA face is the insufficient number of highly qualified and experienced staff with the responsibility of providing cooperative development assistance and programs at the National and State Offices. Cooperative development requires advanced skills in cooperative structure, finance, business planning, facilitation and small group process, and leadership development. There is limited availability of such expertise in USDA today. Development of a skilled staff to do cooperative development work will require training (both formal and on-the-job) and a commitment to recognize cooperative development as a primary (not secondary) job function. It must also be recognized that to develop this expertise will take time, perhaps 3-5 years.

Also, we must begin to measure the outcome of our cooperative development work in providing technical assistance. For many State staffs, performance is based upon number and amount of loans and grants processed, jobs created, delinquency rates, etc. Cooperative development (technical) assistance is measured by different criteria in meeting felt needs by farmers and other rural residents. Recognized and accepted measures are being implemented in the field to encourage staff to promote cooperative development.

Question. Given the experiences in promoting considerable economic development through the creation of cooperatives by federally-sponsored programs that fostered rural electric cooperatives, telephone cooperatives, the farm credit cooperative lending system, etc., how might we undertake a similar approach to promoting cooperatives as an economic development tool today?

Answer. The concept of using programs similar to that used in sponsoring electric and telephone cooperatives is excellent. The cooperative approach is far from exhausted as a developmental tool for strengthening rural America. The potential use of cooperatives for fulfilling a wide variety of economic and social needs in rural America is significant. To accomplish this, several coordinated steps are needed. First, the Department must be given the authority to provide technical and other assistance to all types of rural cooperatives, in addition to its present authority to work with agricultural cooperatives. Secondly, development of an extensive educational program about the cooperative method of conducting business is an essential ingredient to successful program delivery. In addition, like the electric and telephone cooperative success stories, groups forming cooperatives of all types must have adequate equity capital and access to sources of debt capital. A coordinated strategy of promotion, technical assistance, and funding can build a rural cooperative system that will make a real development impact on our most needful rural areas.

Question. Cooperatives, both existing cooperatives and new, start-up cooperatives, may cross State lines. Does this create problems in generating State matching funds?

Answer. While some cooperatives have members located in more than one State (a few even have Canadian memberships), a cooperative's headquarters address is always in a single State. Therefore, from the perspective of programs offered by Cooperative Services and our State Cooperative Development Specialists, multi-state cooperative membership does not create a State matching funds problem. We recognize that many cooperatives to be effective must be regional in nature such as efforts to organize livestock producers in the Northern Plains States. This requires more flexibility and ability to adapt and coordinate activities by State Offices.

Question. What can USDA do to take the cooperative model to other government agencies and make it part of their development outreach programs? Would it be logical to provide set-asides for certain other agencies, requiring them to commit a specific minimum of their development dollars to cooperative development?

Answer. USDA can partner with other agencies at the Federal, State, and local level to insure that information on the cooperative form of business is being fully disseminated to all those who might benefit from its use. Such partnering could be encouraged by the Congress as it authorizes funding for all development programs. We encourage a strategy which recognizes USDA's present lead agency status with respect to cooperative development activities and builds upon it through increased funding and broader authorities. Other Department's cooperative developmental programs are encouraged to work with USDA to insure the provision of strong programs.

While earmarking certain portions of funds for cooperatives will be beneficial, we also encourage an approach that focuses on reducing regulatory barriers to program

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access so that cooperatives can compete for program funds on an equal footing with other forms of enterprise.

Question. USDA has developed a number of public/private partnerships in rural America? What have been your most successful, creative efforts to date and to what extent can these success stories be made widely used models across the country?

Answer. We feel we have great success over the years in working with the land grant university system in carrying out programs of research, education, and technical assistance that serves the needs of local residents. Through cooperative agreements, we have been able to leverage financial resources and expertise in a manner that has been of real benefit to the rural community. We have maintained active partnerships with cooperative centers organized as non-profit private sector organizations in providing a range of cooperative education activities and programs. Through extensive joint planning, program development, and sponsorship, we have been able to make significant contribution to a greater public understanding of cooperatives through such diverse programs as the Cooperative Development Forum, the National Institute on Cooperative Education, the Graduate Institute of Cooperative Leadership, and a range of other programs.

Question. I believe that RDA should be able to provide assistance to cooperatives without regard to specific agricultural linkages in the same ways RDA can assist other forms of business enterprises. I understand USDA is considering such an expansion in authority. What is the status of those plans? If so, what plans are there to ensure that additional personnel and other resources are allocated to take on the work load?

Answer. Yes, we are seeking legislation which would expand the authority of Cooperative Services to provide the same type of advice and assistance to non-agricultural rural cooperatives as they are currently doing for agricultural cooperatives. These include applied research, technical assistance to existing cooperatives, assistance to newly developing cooperatives, education and training, and statistical services. The legislative package for this expanded approval has cleared the Department and is awaiting approval at OMB.

We are examining ways of ensuring that additional personnel and other resources are available to handle this additional work. Since so many of the missions carried out by Cooperative Services are human-intensive, we recognize that additional personnel will be needed such that current services to agricultural cooperatives do not deteriorate.

Question. A major obstacle to cooperative development is finding pre-development funds to get a project started. What suggestions do you have for how USDA can help provide pre-development funds? Have you considered generating a revolving loan fund for that purpose?

Answer. First, we want to point out that it is our belief that strong cooperatives are more likely to be developed if the potential members see the need for the cooperative rather than for a "developer" to try to "sell" the idea. Through State and National Offices, where RBS can best assist is providing technical advisory assistance at no cost to a developing group, after the economic need is determined and thereby reducing the need for pre-development funding for projects that are top-down advocacy rather than bottom-up member driven. This technical assistance is often in the form of providing a feasibility study for which groups otherwise seek outside funding. Further, strong cooperatives usually require financial commitments from their members, thus the need for pre-development funding is often at the member or producer level. With this in mind, the FAIR Act authorized the use of Business and Industry loan funds to be used for producers to purchase stock in start-up cooperatives. Additionally, the Rural Cooperative Development Grant Program, operated by RBS, helps fund Cooperative Development Centers who in turn help do some of the pre-development activities. Further, the revolving fund program operated in conjunction with Rural Utilities Service's borrowers is used as a source of funding some pre-development activities. We are receptive to consideration of a revolving loan program for cooperative development purposes, although such a program would be competing with others for scarce budget resources.

INTERMEDIARY RELENDING PROGRAM

Question. The IRP program is allocated on a project by project basis through a national pool. Has the Department considered allocating a portion of those funds to the states under an administrative formula? If not, why not?

Answer. There has been considerable internal Agency discussion about changing to a system of allocating IRP funds to the Rural Development State Offices by administrative formula, rather than through a national competition. There is a signifi-

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cant amount of staff support for such a change. However, there are also several reasons why such action has not yet been taken.

The current program regulations require applications to be ranked on a national basis and funded in order of priority ranking. Therefore, it would be necessary to go through the rulemaking process, with opportunity for public comment, before a change could be implemented. The issue was not considered prior to publishing a proposed rule for new IRP regulations in the Federal Register in January 1995 and was not the subject of public comment on that proposed rule. The Agency is still working on that rulemaking action and wants to publish a final rule to implement that action before developing a new proposed rule for additional program changes.

The existing requirement for a national ranking was put into the program regulations in 1990 at the insistence of the Office of Management and Budget (OMB). OMB thought a national ranking was the fairest way to distribute the small amount of funds expected to be available for IRP. How current OMB staff would react to a proposal to remove that requirement is not known.

Recent appropriation levels are still small enough that formula allocation to State Offices would cause fundamental changes in the program. For example, if the fiscal year 1997 appropriation amount of \$37,155,765 was allocated according to the formula used by the Agency for other business programs, very few State Offices would receive an allocation as large as \$1 million, which has been the approximate average amount of one IRP loan. The average size of IRP loans would be reduced dramatically. The amount available to some State Offices would not be sufficient to provide adequate funding to justify the creation and administration of a revolving fund by an intermediary.

RURAL HOUSING SERVICE

Question. The Rural Housing Service budget for personnel is being slashed with the hope that significant savings can be realized from the DLOS single family servicing. While there are many demands on the federal budget, the severe reduction in personnel in RHS could jeopardize the government's multi-billion dollar investment in multi- and single-family housing. Even if additional funding is not possible, the Agency needs to maintain its skilled and knowledgeable personnel in the complex multi-family program. To what extent is the USDA considering this important question as it develops possible further USDA Reductions-In-Force.

Answer. Senator Harkin, when we made the decision to implement the Dedicated Loan Origination and Servicing System (DLOS), one of the primary objectives was to mitigate reductions in our staffing levels. As you may be aware, had the servicing of these loans been shifted to the private sector, as was strongly suggested by some, the loss of staff would have been in the neighborhood of 2,700. Implementing the system internally enabled us to hold the staff reduction to only 600 and provided the opportunity to transfer 900 other positions, no longer needed for servicing single family housing loans to other functions that were critically understaffed, one of which was multi-family housing. The majority of the positions transferred went to this program and this was a result of decisions reached jointly with the program staffs in Washington and the State Directors.

Regarding the second part of your questions and future reductions-in-force, it is my policy that a reduction in positions involved in the delivery and servicing of our programs will be considered only after all other options are exhausted. As you know, we are in the process of a reduction-in-force presently for those positions that are to be eliminated with the implementation of DLOS. The scope of this particular reduction-in-force was held to a minimum with the help of the Appropriations Committee's enactment of voluntary separation authority beginning in fiscal year 1997. We limited participation in the voluntary separation to those states that would need to conduct a reduction-in-force associated with DLOS.

Question. The single family direct loan program must be preserved at an appropriate level without the vast difference in loan volume experienced from year-to-year due to changing subsidy rates caused by variations in interest rates. This is particularly important regarding this program where Realtors and banks need to acquire long term relationships in order for the program to smoothly function over the long term. Will the USDA provide the Committee with their best judgments of the likely program to budget authority rate for fiscal 1998 prior to the subcommittee's markup and conference this year?

Answer. We would be most happy to keep the subcommittee informed of the changes in the subsidy rate.

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QUESTIONS SUBMITTED BY SENATOR BYRD

RURAL UTILITIES SERVICE

WATER AND WASTE LOANS

Question. The proposed budget for the water and waste disposal accounts remains approximately at the fiscal year 1997 level. With the 1995 Water 2000 report identifying the need for some \$10 billion in water and waste disposal projects, why has there been no increase in funding for the water and waste disposal program?

Answer. There is great need in rural America for decent, safe drinking water, as reflected in the Water 2000 needs assessment. There continues to be a heavy demand for water and waste disposal funds. Currently the RUS has on hand \$2.72 billion in loan applications and \$1.27 billion in grant applications. The requested fiscal year 1998 water and waste disposal funding levels take into consideration all the rural development needs in rural America. The requested funding level, combined with funds from State, other Federal, and private sources will help achieve measurable progress in meeting the water and waste needs of rural people. The base amount of funding for water and waste grants and loans has remained stable. However, since these programs are included in the Rural Community Advancement Program (RCAP) there is funding flexibility between the water and waste grant and loan programs. Also up to 25 percent within a State's allocation can be transferred between program areas within RCAP (water and waste, community facilities, and business and industry). Further, the matching and mandatory grants to States must be used for RCAP program purposes, so the water and waste program level will very likely be enhanced above the amount currently projected if States have a priority need for water and waste grants and loans.

Question. Under your proposed budget, when will the goals of Water 2000—to provide reliable, clean water for rural Americans—finally be reached in the nation? And West Virginia?

Answer. The RUS has not established a specific time frame for achieving the goals of Water 2000 in the nation or West Virginia. This will be an on going initiative that targets resources from the rural water and waste disposal loan and grant program to all communities with the most serious needs, as soon as possible within overall budgetary constraints.

Question. If additional funding were provided for Rural Development programs, would you agree with me that priority should be given to the water and waste disposal accounts?

Answer. Certainly providing a water supply or waste disposal system to eliminate some acute health or environmental problems is a very important first step for many communities. However, attempting to set priorities among various services when much of the population that we serve has been without water supply or waste disposal, housing, health care, or employment for decades is very difficult. We think priorities should be set by the communities and the people they serve, and we are now attempting to work with communities and their residents in developing plans to determine their priorities rather than simply process loan and grant applications. Implementing the Rural Community Advancement Program goes to the heart of that effort. The communities with whom we have worked have found the process to be very helpful and responded very favorably to this process.

Question. In your prepared statement, you observe that this budget reflects the President's belief that jobs create opportunity and long-term community stability. How do you expect to achieve these economic goals without providing adequate funding for essential water and waste disposal systems?

Answer. Given the budget constraints that all of us are forced to work within, we think we have submitted a very responsible budget, particularly with regard to water and waste disposal grants and loans. This funding level along with the total program level for all Rural Development, will be adequate to achieve job opportunities and community stability for Rural America.

RURAL COMMUNITY ADVANCEMENT PROGRAM

Question. Your budget calls for funding for the RCAP, a new funding initiative. Given the current shortfalls in funding available to meet needs already identified within the community facilities, water and waste disposal, and business assistance accounts, why pull funds from these critical programs to establish a new funding mechanism?

Answer. Senator Byrd, the 1996 Farm Bill authorized the Rural Community Advancement program (RCAP) as a means of providing flexibility in the administration of the programs you referenced. This flexibility is badly needed by our State Direc-

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tors as they attempt to stretch shrinking Federal resources further to meet growing demand for these programs and to target their funds appropriately.

Question. What is the cost associated with establishing RCAP?

Answer. There is no cost associated with implementing RCAP. RCAP only changes how we administer our programs.

QUESTIONS SUBMITTED BY SENATOR LEAHY

RURAL BUSINESS-COOPERATIVE SERVICE

BUSINESS AND INDUSTRY LOANS

Question. On March 7, the Vermont Rural Development office received a letter from Rural Business Cooperative Service Administrator, Dayton Watkins announcing that 50 percent of all unobligated Business and Industry Loan Guarantee program funds should be returned immediately to the national office for re-pooling. This unwarned early re-pooling cost Vermont \$600,000 and New Hampshire \$2 million. The letter claimed this was necessary to address a backlog of projects. Early re-pooling causes significant problems for Vermont. First, the State's strategic plan targets new construction in rural areas which requires time consuming project development. Second, because of the short construction season, businesses often do not approach Rural Development for funding until close to the beginning of the building season in March or April. The Department normally "re-pools" funds in July. Why did Administrator Watkins make the decision to change the rules on the states in midstream? Can I have your assurance that states will not be subjected to this kind of unexpected and unplanned for program change in the future? What procedures does USDA currently have in place to ensure that field offices are not taken off guard by sudden changes in program funding or operation?

My concerns about moving up re-pooling dates is not limited to the B&I program. The factors which contribute in Vermont to the need for availability of program funding through the Spring are equally applicable to many other Rural Development programs. I would repeat my first question with regard to the steps that the office has in place to protect state funds from unexpected early re-pooling for all Rural Development programs.

Answer. The pooling of the Business and Industry (B&I) Guaranteed Loan Program authority has normally been executed in two stages, the first occurring in April and the second in August each year. In an effort to give State Directors more flexibility in managing their program resources, the Administrator decided to have only one pooling in fiscal year 1997, which was to occur July 11, 1997. However, because of the tremendous demand for the B&I program nationally, it became necessary to implement an early pooling to accommodate those demands. By the end of February 1997, many States had used their entire allocation and needed additional guarantee authority in order to keep their B&I program open and to enable them to maintain new relationships with business communities and lenders. Other States have not used or had application activity in amounts that would use their allocation. In addition, the National Office Reserve was completely exhausted of funds, yet, there was a backlog in demand from States for the reserve resources. Out of several options presented to the Administrator to handle this program, the Administrator chose to pool fifty (50 percent) percent of the balance resulting from subtracting the preapplications/applications on hand from the unobligated B&I allocation for each State.

At the time of pooling, Vermont and New Hampshire had a total of \$2,698,000 and \$4,074,000, respectively, in unobligated B&I authority, with only \$1.5 million of preapplications/applications on hand in Vermont. New Hampshire had no preapplications/applications. The amount pooled for Vermont and New Hampshire, respectively, was \$599,000 and \$2,037,000. This left a total of \$2,099,000 and \$2,037,000 for the two States until additional resources could be made available.

According to our latest B&I report, Vermont has obligated \$520,000 of its fiscal year 1997 allocation, and New Hampshire has not obligated any funds. While Vermont and New Hampshire have approximately \$5 million and \$4 million in preapplications, we hope to have authority to cover these demands after the July 11, 1997, pooling.

With regard to the issue of advance notification to State Directors regarding the B&I program status, in the future we will notify our State Directors through their Executive Committee of the Administrator's plans. In this instance, the Administrator did not have the time to give advance notice to States of this action.

Also, please note, that procedures for the field office funding allocations are administrative in nature, which offers the Administrator flexibility in administering

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programs in the Rural Business-Cooperative Service agency. The authority used is executed in a prudent, rational, and logical manner always considering the potential impact on all rural America and the States responsible for making programs available to them. It has been our experience in the past that some States do not use all of their B&I allocations, while others may use much more. If the Administrator did not have flexibility in managing the RBS programs, it's probable that we would not utilize all of our B&I authority nationwide.

RURAL DEVELOPMENT

FIELD RESTRUCTURING

Question. The Department has made significant progress in meeting staff reduction goals as required by the USDA Reorganization bill that Senator Lugar and I authored in 1994. In fact the Rural Development Office in particular has exceeded those goals—in Vermont by 20 percent—with the implementation of centralized loan servicing. I commend you for your commitment to increasing the efficiency of USDA offices—that was also the driving goal behind my Reorganization bill three years ago. However, I want to be sure that additional staff reductions do not come at the expense of customer service. The Vermont Rural Development office in particular is undergoing major changes to maximize efficiency with significantly reduced staff. Where once seven offices served Vermonsters, by the end of the year only one central office will remain. What steps is the Department taking to encourage feed-back from field offices on the restructuring? How are you monitoring any changes in office performance or program participation to make sure that the level of customer service is being maintained?

Answer. We appreciate and share your concern that the quality of service received by our customers should not be reduced as a result of reduced staffing levels. While our current staffing levels will not allow us to maintain the number of offices we have had in the past, we are providing our field staff with training to assist them in responding to the transition and to customer service changes that may be required. This training is designed to: 1) help our field employees cope with the changes brought about by the reorganization and 2) provide them with the skills required to satisfy our customers' needs from the downsized structure. This training is being provided at the local USDA Service Center level and includes employees from the Farm Service Agency (FSA) and the National Resources and Conservation Service (NRCS), as well as Rural Development employees. As part of this training session, feedback is solicited from field office employees on issues related to the downsizing and barriers to providing good customer service are identified. This information will be helpful in determining what changes are needed in processes or organization to ensure quality customer service is provided. We will also be monitoring quality of service performance by obtaining periodic feedback directly from customers through mail or telephone surveys or through focus groups.

RURAL HOUSING SERVICE

DEDICATED LOAN ORIGINATION SERVICE SYSTEM (DLOSS)

Question. The 1996 Farm bill eliminated much of the administrative work required by many Farm Service Agency programs. The changes should mean that far fewer employees will be needed at FSA to run these programs. Are you working with other Department offices like FSA to make sure that staffing needs are addressed Department-wide and not on an agency by agency basis?

Answer. Rural Development is working with both FSA and NRCS to ensure that, wherever possible, administrative activities are shared. Joint task forces are looking at short and long term procedures that can improve the support necessary to deliver our programs. We hope that in the long run this will result in economies of scale in staffing needs devoted to non-program activities in the field. We also hope that this effort will result in some standardization of these policies among the three agencies that will reduce confusion from inconsistencies for both our employees and our customers.

Question. I understand that the Department expects the centralized loan servicing system to be fully operational by the Fall of 1997. Have you experienced any problems so far in the transition to the centralized system? Has the office noticed any changes in program participation, the time required to process loans, program costs, or delinquency rates to date? What steps are you being taken to ensure that changes like this will be tracked and addressed?

Answer. The Department does expect to be fully operational by October 1, 1997. The development of the Centralized Servicing Center and conversion of the Rural Housing Service Single Family Housing portfolio from the old system to the new

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centralized environment continues to progress on time and on budget. Any project as large and aggressive as the reinvention of an \$18 billion, 700,000 plus loan portfolio would experience some problems. Nothing, however, has arisen to date that would throw the conversion off track or off schedule.

As of April 15, 1997, the Agency is on track for full utilization of loan funds and in fact there continues to be a shortage of funds needed to finance all pending applications.

The new UniFi loan origination system has been well received in the field. UniFi is a state-of-the-art windows-based program which automates much of what was a manual process. Therefore, the time required to process loans is reducing and will continue to improve as the field becomes more experienced on the new system.

The conversion process will continue through September of 1997. Therefore, it is too soon to make any definitive judgments as to impacts on program costs or delinquency rates.

The new commercial-off-the-shelf system that the Agency purchased from Fiserv Mortgage Systems, which has been enhanced to accommodate the unique nature of the Rural Housing Service Single Family loan program, will be able to track the status of the portfolio in a much more comprehensive manner than ever before in the history of the program. We will be able to more accurately monitor every area of the program including costs and delinquencies. The DLOS system will give us much improved checking and management information data, for example:

We will be able to monitor first-year delinquencies by county which allows the Agency to better evaluate underwriting practices, and respond to delinquencies much faster, thereby, improving the probability of the borrower to become a successful homeowner and reduce cost to the taxpayer.

RURAL DEVELOPMENT

Question. In 1995 the National Science Foundation completed a study on measuring poverty. The report concluded that the way the government measures poverty today is inaccurate and that shelter costs among other things should be factored into the measure. The findings of a recent report by the Peace & Justice Center in Vermont supports the argument that poverty in Vermont is underestimated. Other states have conducted similar surveys, with largely similar results. Many USDA programs including those run by Rural Development base state program funding on the poverty measure. The Office on Management and Budget has recently formed an inter-agency task force to decide if changes to the poverty measure are needed. Is Rural Development participating in that task force? Would you consider alternatives to the current poverty measure to determine funding needs?

Answer. We would certainly be willing to consider alternative measures of poverty. Rural Development has not been asked to participate in the inter-agency task force on poverty. The Office of Management and Budget advises that they have formed a steering committee. We will ask to be added to the committee.

Question. I was disappointed that Rural Development chose to use its portion of the fiscal year 1997 Fund for Rural America for program backlogs. While some supplemental funding was legitimately needed, in the housing program in particular, I feel that this opportunity to do something innovative was largely missed. Will the office be looking for more creative uses of the Fund for Rural America in fiscal year 1998? Will you work with Congress in determining an appropriate use for the Fund? Will Rural Development provide adequate time between the announcement of how the Fund will be used and the distribution of that funding to allow states with projects under development to submit applications for consideration?

Answer. Senator Leahy, as you are aware, the provisions of the Fund for Rural America require that the rural development portion of the Fund be used through existing programs which means that existing statutes and regulations apply. This limits our ability to use the funds for innovative purposes. However, as I am sure you will agree, the distance learning/telemedicine grant program is one of the most innovative and effective uses of funds. It combines the advancement of technology with the need to provide higher quality education in rural areas that will allow rural students the opportunity to be competitive in an economy increasingly dependent on technology.

It is difficult to weigh the need for innovation against providing basic services that residents of rural areas have been without, such as safe drinking water in their homes and adequate housing. However, we would be happy to consider any suggestions you have in using the funds in more innovative ways. As you are aware many members of Congress urged the Department to address the substantial backlogs of applications in many of our programs and we attempted to balance the two de-

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mands, along with addressing the funding shortfall in the single family housing program.

RURAL BUSINESS-COOPERATIVE SERVICE

INTERMEDIARY RE-LENDING PROGRAM

Question. The Department has been working on changes to the Intermediary Relending program for two years. These changes are needed to eliminate the \$2 million cap for successful lending organization, and to streamline the operation of the program. What is the status of the IRP proposed rules? What steps remain before the final rule will be ready? When does the office expect the final rule to be approved?

Answer. The Final Rule for the Intermediary Relending Program has recently cleared the USDA Office of the General Council. It is in the final steps of the process of being cleared through the Department.

The Final Rule will then be forwarded to the Office of Management and Budget (OMB) for review and clearance. OMB has up to 60 days to review and clear the regulation.

Upon OMB clearance, the Final Rule will be published and effective.

RURAL DEVELOPMENT

RURAL COMMUNITY ADVANCEMENT PROGRAM

Question. I understand that Rural Development's fiscal year 1998 budget request incorporates the RCAP authorized in the 1996 Farm Bill. Specifically how will funding be divided among the RCAP programs, and what steps has the Department taken to ensure that transfers between RCAP programs will be documented and tracked? Has the Department noticed any change in the way states operate programs in the RCAP or spend money from those programs?

Answer. The budget documents provide a table of the programs and requested funding levels for the RCAP. The Rural Development Mission Area has developed a simple software package to track transfers. This software will be made available to State Directors and Agency Administrators so they can discuss suggested transfers and both parties will be able to examine the effects of the transfers simultaneously. If a transfer is agreed to, the State Director will transmit a formal request to the appropriate Administrators for concurrence and the transfer then can be executed. The software will summarize transfers by program and by state in order to ensure the 10 percent national cap on transfers is adhered to. In fiscal year 1996, 44 transfers were made in the Rural Utilities Assistance program, 34 of the transfers involved shifting budget authority from grants to loans, thereby increasing the number of loans that were made. One state shifted all of the grant funds to loans because there was not a current demand for grant funds. The remaining transfers shifted small amounts of budget authority from the loan program to the grant program primarily to complete financing for specific projects. In every instance, the funds were used wisely and effectively and the State Directors are to be commended for their decisions.

Question. The Federal Agriculture and Improvement and Reform Act authorized a rural capital demonstration program as a way to get more private sector investment into rural business enterprises. Both the Senate report and the conference report on the fiscal year 1997 Agriculture Appropriations Act provided for funding of this demonstration out of the Business and Industrial loan program. Instead, USDA has just issued an 'Advanced Notice of Proposed Rulemaking'. This appears to me to be little more than a delaying tactic. What is the reason for the delay in going forward with this program? Is there a need for corrective legislation? How can we expedite the implementation of this important program?

Answer. Senator Leahy, the fiscal year 1997 Agriculture Appropriations Act blocked implementation of the venture capital demonstration that you have referred to. The Advance Notice of Proposed Rulemaking to which you refer is not a delaying tactic, in fact, it is quite the opposite. The staff of the Rural Business-Cooperative Service that will administer the program has no experience with venture capital funds and with the notice is soliciting ideas from interested parties about how best to administer such a program. As you are aware, venture capital is very risky and we want to be certain we take every step possible to protect the public's interest.

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SUBCOMMITTEE RECESS

Senator COCHRAN. Thank you all very much for your cooperation with the subcommittee and your attendance at this hearing.

Our next hearing will be on Tuesday, April 22, at 10 a.m., in room 138 of the Dirksen Senate Office Building. At that time, we will review the budget request for the Department's research, education, and economics programs. Until then, the subcommittee stands in recess.

[Whereupon, at 11:30 a.m., Tuesday, April 15, the subcommittee was recessed, to reconvene at 10:10 a.m., Tuesday, April 22.]

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AGRICULTURE, RURAL DEVELOPMENT, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1998

TUESDAY, APRIL 22, 1997

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:10 a.m., in room SD-138, Dirksen Senate Office Building, Hon. Thad Cochran (chairman) presiding.
Present: Senators Cochran, Gorton, Burns, and Bumpers.

DEPARTMENT OF AGRICULTURE

**STATEMENT OF DR. CATHERINE E. WOTEKI, ACTING UNDER SEC-
RETARY, RESEARCH, EDUCATION, AND ECONOMICS**

ACCOMPANIED BY:

**DR. FLOYD P. HORN, ACTING DEPUTY UNDER SECRETARY, RE-
SEARCH, EDUCATION, AND ECONOMICS**
**DENNIS KAPLAN, DEPUTY DIRECTOR, OFFICE OF BUDGET AND
PROGRAM ANALYSIS**

AGRICULTURAL RESEARCH SERVICE

STATEMENT OF DR. EDWARD KNIPLING, ACTING ADMINISTRATOR

**COOPERATIVE STATE RESEARCH, EDUCATION, AND EXTENSION
SERVICE**

STATEMENT OF DR. B.H. ROBINSON, ADMINISTRATOR

ECONOMIC RESEARCH SERVICE

STATEMENT OF KELLEY WHITE, ASSOCIATE ADMINISTRATOR

NATIONAL AGRICULTURAL STATISTICS SERVICE

STATEMENT OF DONALD BAY, ADMINISTRATOR

OPENING REMARKS

Senator COCHRAN. The subcommittee will please come to order. We welcome all of you today to our hearing reviewing the President's budget request for the Department of Agriculture, specifically in the area of agriculture research, education, and economics. This includes the Agricultural Research Service's budget; the budget of the Cooperative State Research, Education, and Extension Service; the Economic Research Service; and the National Agricultural Statistics Service.

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Our witnesses this morning are Dr. Catherine Woteki, who is Acting Under Secretary for Research, Education, and Economics; Dr. Floyd Horn, Acting Deputy Under Secretary for Research, Education, and Economics; Dr. Edward Knipling, Acting Administrator for the Agricultural Research Service. I am not sure about the titles of the rest of the witnesses. They probably are all Ph.D's in something, but also here with us are Dr. Bob Robinson, Administrator, Cooperative State Research, Education, and Extension Service; Kelley White, Associate Administrator for the Economic Research Service; Donald Bay, Administrator for the National Agricultural Statistics Service; and Dennis Kaplan, with the Office of Budget and Program Analysis of the Department of Agriculture.

We appreciate very much your attendance at the hearing and your cooperation with our subcommittee. We have your written testimony which we will put in the record in full, and encourage you to make any summary or additional comments you desire. Then we will have an opportunity to take questions from the subcommittee members.

Before calling on you to proceed, I am going to recognize the distinguished ranking member of the committee, Senator Bumpers from Arkansas, for any comments that he might have.

Senator BUMPERS. Mr. Chairman, I do not have an opening statement.

Senator COCHRAN. Senator Burns, do you have any comments?

Senator BURNS. Just one. Thank you, Mr. Chairman, for holding this hearing. It is ironic that just down the hall I am also involved in a hearing with the Office of Science and Technology Policy, which is Dr. Jack Gibbons and Dr. Neal Lane and the National Science Foundation. It is just down the hall.

I made the statement 3 years ago that I was concerned about the declining dollars in agricultural research, and I am still concerned about that, and said at that time when I was serving on the authorizing committee over in Commerce and Science and Technology that maybe we are going to have to use some of their resources and funds to really pick up the shortages that were lacking in agriculture, because I do not think there is any other part of science and technology that is any more important to us as a society and as a country than the work that we do in agricultural research, and also in extension and getting that information out.

But it is pretty hard to get people excited about agricultural research when their mouths are full and their stomachs are full, but we can see the day—and all you have to do is travel around the world.

Just go around the world and see a system like Russia, that has fallen apart because of the lack of interest in their agriculture. In fact, theirs is a society that cannot even feed themselves and have all kinds of prospects to do so.

So I think it is very, very important, and I am interested in hearing from our witnesses today, but I appreciate the attitude and the working relationship, especially with Dr. Horn, and what we have tried to do in agriculture research. We still have a long way to go to get it at the levels that we both would like to see it, because we both, I think, share the same feeling about the subject.

Thank you very much.

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Senator COCHRAN. Thank you, Senator.

Senator BUMPERS. Mr. Chairman, may I make just one statement?

Senator COCHRAN. Senator Bumpers.

Senator BUMPERS. I think I have made this before to this committee, but it is so good it is worth repeating. I have been increasingly concerned about the amount of money we put into agricultural research. It seems to me that we have got a real train wreck coming, and that we have yields that are either static or in 1995 a lower yield per acre on corn for the first time in modern history.

I think that when it comes to research in agriculture we should reflect on this. We spend \$36 billion a year on trying to make things explode down at the Defense Department in research. We spend \$13 billion at the National Institutes of Health, which incidentally should be considerably higher. We spend \$12 billion a year on space, which we have gotten very little from and in the future we will get even less, and we spend \$1.2 billion a year on agricultural research. Dr. Horn, is that about right?

Dr. HORN. That is correct.

Dr. WOTEKI. That is correct.

Senator BUMPERS. When you consider the fact that of the 438 million arable acres of land in the United States, and the fact that we are taking 3 or 4 million acres out a year for highways, suburban sprawl, shopping centers, you name it, so what you have is a static production level, yield, you have a loss of your crop base to urban sprawl, and finally, there will be about 10 million more people in the United States about 10 to 15 years from now than there are now, when you put all those together, to call it a train wreck is probably being moderate.

Now, this is not going to happen overnight, but all I am saying is that since we have the Agricultural Research Service here this morning I wanted to make that point and say again there is not anything wrong with Congress or anything wrong with this country except misspent priorities.

When I consider the fact that we are putting so much in space and so much in the military, and as I say, explosionmaking, and yet you have a really macroproblem staring us in the face, I say our priorities are wrong.

Thank you, Mr. Chairman.

PREPARED STATEMENTS

Senator COCHRAN. Thank you, Senator Bumpers. We have prepared statements from Senator Byrd and Senator Dorgan that will be made part of the record.

[The statements follow:]

PREPARED STATEMENT OF SENATOR BYRD

Chairman Cochran, Senator Bumpers, members of the subcommittee, and Under Secretary Woteki, I am pleased to be here today to review the U.S. Department of Agriculture's (USDA) research, education, and economics programs. The mission of these accounts is three fold: meeting the challenges of an increasingly competitive global market, supplying safe, wholesome food produced under environmentally friendly conditions, and responding to the industrialization of American agriculture.

Today, I would like to discuss the unique needs of West Virginia's rural farmers and citizens, and the importance that USDA programs play in their future. While West Virginia may lack a concentration of farm activities compared to other states,

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West Virginia farmers are hard working family operators who take pride in the quality of their production and in a self-imposed stewardship of their ancestral lands. It is my opinion that small and part-time businesses, such as West Virginia farm operations, represent the backbone of our nation's economy.

I believe that the USDA must have the foresight and the funding necessary to help rural, small family farmers, and their communities, stay in the lead of emerging opportunities, which I believe is essential to creating and retaining jobs. In this regard, I will give a quick illustration of an Agricultural Research Service (ARS) project, which I thank this subcommittee for making possible, that has already had a valuable economic impact on West Virginia, although the facility has yet to be constructed. I refer to the National Center for Cool and Cold Water Aquaculture. All leading sources of data now confirm that aquaculture production will create hundreds of jobs and generate millions of dollars in the state, and the development of this industry is a state government priority. Many reports further suggest that abandoned mine sites can be used for aquaculture with impressive economic results. Already, West Virginia boasts forty-plus active aquaculture producers, with increased activity expected this year. The new center will be an important link in maximizing this emerging field.

I have several questions regarding the Agricultural Research Service (ARS) facilities in West Virginia that support the development of research important for West Virginia farmers.

CONCLUSIONS

I hope that this subcommittee will join me in supporting ARS projects, and I look forward to working with the Chairman, ranking member, and other subcommittee members, in conjunction with the Under Secretary, in ensuring that the ARS's mission is achieved.

PREPARED STATEMENT OF SENATOR DORGAN

Mr. Chairman, thank you for the opportunity to submit this statement. Since I was accompanying President Clinton on his trip to Grand Forks, North Dakota to view the flood devastation in the Red River Valley, I was not able to attend the hearing to express my deep concern on an issue of great importance to the Northern Plains.

At a time when production agriculture is being required to become more environmentally sensitive and globally competitive, I believe it would be a giant mistake for the Agricultural Research Service (ARS) to close its Northern Great Plains Research Center at Mandan, North Dakota, as is currently proposed within the fiscal year 1998 budget for the U.S. Department of Agriculture.

The Northern Great Plains is a semi-arid region, with wide climatic extremes in temperature, wind, and moisture conditions, resulting in considerable variation in growing seasons. This region has a mixed agricultural base of grains, livestock, and other crops produced within a complex, but fragile ecosystem.

The Mandan ARS laboratory is the only ARS facility which has been conducting comprehensive agricultural production research as it specifically relates to the ecosystem of the Northern Great Plains. Since it was established by Congress in 1912, this research facility has been providing sound agricultural research for the unique needs and the environmental challenges facing farmers and ranchers in this region.

The Mandan ARS facility is centrally located in the Northern Great Plains. Its location is a critical component of the value of its research and the importance of this facility to this region.

The proposed closing of this station is not a simple matter of transferring research projects to other ARS locations. Nor is it a matter of eliminating research projects that duplicate similar research at other ARS locations. This closing would be the end of ARS research that is site specific to the Northern Great Plains ecosystem. It would leave a void for the region's agriculture that simply could not be effectively filled from other research resources.

The closing of this facility would be a serious blow to the future capability of agriculture in the Northern Great Plains to be competitive in the new global marketplace. At the same time the closure would be devastating to the continued development of environmentally sensitive and sustainable production systems for this region. I believe this ARS facility and its research programs are a vital link to the future economic and environmental health of the Northern Great Plains.

I have reviewed the project evaluation process by which ARS made its determination to close the Northern Great Plains Research Center. I believe a fundamental weakness in the subjective point system by which ARS projects were judged is that

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this process did not give adequate importance to research specific to the needs of a regional ecosystem.

Unfortunately, the decision data by which ARS screened its projects has not been made available to Congress or to the affected ARS facilities. However, I have been told by USDA officials that the projects proposed for termination at the Mandan ARS facility were right at the cutting line. I believe this makes it even more important not to predetermine the fate of this facility which is critically important to the future of Northern Great Plains agriculture.

If ARS is allowed to proceed with the closure of the Northern Great Plains Research Center, this facility would be precluded from undergoing the strategic planning review process established by Section 884 of the 1996 farm law.

This section requires the Secretary of Agriculture to establish a Strategic Planning Task Force to review "all currently operating agricultural research facilities constructed in whole or in part with Federal funds," as well as proposed future facilities. These facilities were to be reviewed in the context of the development of a ten-year strategic plan which reflects "both national and regional perspectives for development, modernization, construction, consolidation, and closure of Federal agricultural research facilities."

It is both presumptive and premature to make a decision on the closure of the ARS Northern Great Plains Research Center at this time. This facility should have the full opportunity to undergo the review process established by the 1996 farm law. The law's emphasis on having both national and regional perspectives considered by the Strategic Planning Task Force would give the Northern Great Plains Research Center the consideration that it deserves.

I want to underscore that the Northern Great Plains Research Center deserves the same consideration and review that will be accorded all other existing and proposed federally-funded research facilities under the provisions of the 1996 farm law.

This facility has an excellent history of providing sound conservation research which has enhanced both the productivity and the environment of the Northern Great Plains. It has been particularly responsive to the conservation needs of the region.

The fragile environment of this region with its low rainfall, shallow soils, and intense winters presents a unique challenge for effective conservation. Through its research into minimum-till, no-till, and reduced fallow cropping and conservation systems, the Mandan ARS facility has already made great contributions to reduced soil erosion and improved environmental quality.

This nation is making a considerable investment in the revised Conservation Reserve Program (CRP). This facility's research in grasses and grassland management has provided the base of information needed for land going into the CRP. Through its research into crop rotation and continuous cropping systems, it provides the needed information for land coming out of the CRP to be farmed within established conservation standards.

The nation has also embarked on the newly-established Environmental Quality Incentives Program (EQIP), which replaces and expands the Great Plains Conservation Program. The ARS facility at Mandan is central to these programs in the Northern Plains. Without the ongoing grasslands and grazing research at this location, we will not be able to achieve the full economic and environmental benefits envisioned by these programs. This is particularly true if the range management conservation component of the EQIP program is to be successful.

The Northern Great Plains Research Center has unique land and physical facilities and has developed particularly strong ties to the farmers and ranchers who are the beneficiaries of its research activities. One example of this is Area IV Soil Conservation Districts, which provide a 400-acre farm to the center for conducting field-scale research.

While its tree research project was terminated a year ago, this facility continues to provide a tremendous resource of information and tree cultivars. It should be also noted that this facility was the primary research center for reclamation of surfaced-mined land. This reclamation research has been essential to the region's lignite mining and energy production industry in establishing and meeting reclamation requirements.

This facility has a long list of accomplishments to its credit. Both the facility and its scientists are internationally recognized for their work. It is not surprising that this ARS facility has received support from a broad base of farm, environmental, and research communities. It is particularly noteworthy that organizations such as The Wildlife Society, Ducks Unlimited, and the Audubon Society have expressed opposition to the closure of this facility and instead, call for its expansion.

The long history of contributions that this facility has made to agriculture and the environment in the Northern Plains region gives credence to giving this facility

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a second look and allowing it to undergo the Strategic Planning Task Force review process.

Therefore I urge the Subcommittee to maintain the existing programs at the Northern Great Plains Research Center and to defer any decision on closure of this facility until that process is completed.

Mr. Chairman, I want to thank you again for the opportunity to outline the importance of this research facility to the Northern Plains.

STATEMENT OF DR. WOTEKI

Senator COCHRAN. Dr. Woteki, you may proceed.

Dr. WOTEKI. Thank you very much, Mr. Chairman, and members of the committee. We very much appreciate the opportunity to be here with you this morning and to present to you the research, education, and economic fiscal year 1998 budget request.

I might say that both Senator Burns and Senator Bumpers, your opening comments very much reflect our own concerns both about the importance of agricultural research for the future of this country and also our concerns about the level of funding for agricultural research. But before I begin what is going to be a very brief overview of our fiscal year 1998 budget request, I would like to draw your attention to a recent development that affects our fiscal year 1997 budget.

On April 16 the House Appropriations Subcommittee marked up the Department's request for supplemental funding, and in the course of the markup cut \$20 million from the Fund for Rural America as an offset for emergency funding for fiscal year 1997.

Secretary Glickman is drafting a letter to express his concerns about this reduction, but let me take this opportunity to emphasize my personal dismay and disappointment that the Fund for Rural America was identified for this reduction.

FUND FOR RURAL AMERICA

The Fund for Rural America was authorized under section 793 of the Federal Agricultural Improvement and Reform Act of 1996, and it provides \$100 million in each of three increments beginning this year, 1997, for the provision of rural development programs and also a competitive grants program for research, education, and extension activities.

In the most extreme case, if this entire offset were to come out of the competitive grants program, that \$20 million offset will reduce the \$46 million the Secretary has designated for research, education, and extension projects by about 40 percent.

At first glance, Mr. Chairman, it may seem simple to reduce the Fund for Rural America grants program. After all, the closing date for applications is next week, April 28, and as a new program it does not as yet have a very obvious constituency. However, the enthusiasm for this program has been unprecedented, and the program has been of particular interest to the schools of 1890, the tribal colleges, Hispanic-serving institutions, as well as the land-grant universities.

As of yesterday, Mr. Chairman, 425 applications have been received for center grants which will award up to \$1 million each year over 4 years, and we have made a rather conservative estimate of the number of grant applications we expect next week for

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the project grants, which would be up to \$600,000 for a project for up to 4 years.

We anticipate that we will get at a minimum 1,100 grant applications for those project grants, so I am not exaggerating when I say the Fund for Rural America has been a very popular program, and that I believe we will have a very diverse pool of applicants representing the private, as well as nonprofit and university, sectors.

Congress created the Fund for Rural America at the same time that it fundamentally reformed the Federal farm programs. These policy changes are likely to have a substantial and dramatic impact on production agriculture by shifting price and income risk management away from Government programs to individual farmers.

Cuts in the research, education, and extension portion of the fund are going to substantially impair the goal of this transitional program that has been designed to advance the findings of research into very practical applications to address emerging problems and to develop new opportunities for the benefit of rural America.

It is our very great hope, Mr. Chairman, that the cuts to the Fund for Rural America will be restored when your subcommittee considers the emergency supplemental appropriations legislation next week.

At this point, I would like to turn to highlight our fiscal year 1998 budget request for research, education, and economics. It totals \$1.8 billion. It is a decrease of \$49 million, or about 2.6 percent from our fiscal year 1997 appropriation.

I believe that this budget request both in the total funding as well as in the specific initiatives it contains represents a sound balance between our commitment to research, education, and extension on the one hand and the administration's commitment to a balanced budget on the other.

To get on the path to a balanced budget by fiscal year 2002, the four agencies that are represented here, along with other USDA agencies, have had to make some rather difficult decisions to reduce or to terminate some important programs in order to fund what we now consider to be higher priority programs. However, we have done a careful assessment of our priorities and we have been able to fund an increase of \$11 million, or about 1 percent, in research in this budget request.

The Agricultural Research Service budget is essentially the same as this year, \$800 million. The request reflects adjusted priorities leading to an additional \$10 million in research and a commensurate decrease in funds for buildings and facilities. The budget also provides for redirecting some funding, permitting the agency to allocate a total of approximately \$30 million in funding for high-priority research programs.

The Cooperative State Research, Education, and Extension Service budget request is \$840 million. Funding for formula programs is held constant at the fiscal year 1997 appropriated level. The National Research Initiative [NRI], as it is called, is increased by \$36 million. Decreased funding is proposed for earmarked special grants programs, buildings and facilities projects, and selected extension programs.

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The administration continues to believe that the NRI competitive grants program provides our most effective mechanism for eliciting and supporting the most meritorious science being conducted by university scientists.

The Economic Research Service's request is \$54 million. With an increasingly market-oriented agricultural sector, the need for economic analysis to understand the implications of new developments in technology, in policy, and in trade is critical for both public, as well as the private sector, decisionmakers. The fiscal year 1998 budget request provides funds to secure critical data to underpin these very important analyses.

The National Agricultural Statistic Service request is \$120 million, which represents an increase of \$20 million, largely for funding the peak year of the census of agriculture.

Responsibility for the census of agriculture was transferred from the Department of Commerce to NASS on October 1, 1996, and NASS is conducting the census under the Agency's broad authority to conduct agricultural surveys. We are seeking specific authorizing legislation to clarify those authorities, and I also ask your assistance and support for swift passage of this legislation.

In addition to the census, which is a very high priority for us, our budget request focuses on some high-priority administration initiatives, and these include food safety, with an increase of \$8 million, human nutrition, with an increase of \$12 million, germplasm collection and preservation, \$2 million, integrated pest management, an increase of \$15 million, emerging infectious diseases, an increase of \$5 million, and children, youth, and families at risk, an increase of \$2 million.

This last increase will restore funding for this program to its fiscal year 1995 level, and provides an additional \$1.7 million to be targeted to the 1890 institutions that are now eligible to receive Smith Lever 3(d) funding directly.

I mentioned earlier the slight decreases in the collective Research, Education, and Economics Agency budgets. This is due largely to reductions in the Agricultural Research Service and the Cooperative State Research, Education, and Extension Service budgets for buildings and for modernization of research facilities.

The funding level for buildings and facilities reflects a decrease of \$72 million this year, \$10 million from the Agricultural Research Service, and \$62 million in CSREES. Given the constraints in this budget, as well as the future costs that are associated with maintaining new facilities, we believe it is more important to put funds into research and education than into bricks and mortar, and we also believe that, since the Secretary has just recently appointed the members of a new task force to review our agricultural research facilities and to make recommendations on a strategic plan for investment in agricultural research facilities, that it is wise at this point to defer decisions about new construction.

In closing, I would like to express my interest in working closely with you and with this subcommittee as we continue to develop the strategic plans and our annual performance plans that are required under the Government Requirements and Results Act. I thank you for the opportunity to present our budget request for fiscal year

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1998, and my colleagues and I are going to be happy to answer any questions you might have.

PREPARED STATEMENTS

Senator COCHRAN. Thank you very much, Dr. Woteki. We have your written statement and it will be made part of the record along with statements from Dr. Knipling, Dr. Robinson, Dr. Offutt, and Mr. Bay.

[The statements follow:]

PREPARED STATEMENT OF DR. CATHERINE E. WOTEKI

Mr. Chairman, Members of the Committee, I am Dr. Catherine Woteki, Acting Under Secretary for Research, Education, and Economics (REE) at the Department of Agriculture. I am accompanied by Acting Deputy Under Secretary, Dr. Floyd Horn, and the Administrators of the four agencies in the Research, Education, and Economics mission area: Dr. Edward Knipling, Acting Administrator of the Agricultural Research Service; Dr. Bob Robinson, Administrator of the Cooperative State Research, Education, and Extension Service; Dr. Susan Offutt, Administrator of the Economic Research Service; and Mr. Donald Bay, Administrator of the National Agricultural Statistics Service. Each Administrator has submitted written testimony for the record. We have come with a few of our senior staff to discuss the fiscal year 1998 Budget proposal in detail. Before we begin, however, I would like to make a few general remarks about the REE mission area and its four agencies.

In 1994, as a part of the USDA reorganization, the REE mission area was created, bringing together the Department's primary agencies responsible for research, statistics, education, and extension. Drawing on their distinct, yet complementary capacities, the REE agencies play a critical Departmental role by supporting the work of agencies in other USDA mission areas—agencies responsible for programs that focus on the environment and natural resource conservation, human nutrition, food safety, rural development, and the production and marketing of agricultural products. REE funded physical and biological research continues to play a central role in providing the scientific foundation for a vast array of advances being made in agriculture and related industries. Our data collection and analysis provide policy makers, program managers, and producers critical information about agricultural commodities and markets. In collaboration with other USDA agencies, REE also supports research, education, and extension to better understand how good nutrition contributes to good health, to develop efficient production practices that respect the integrity of the environment, to facilitate adoption of food processing practices that promote safe food, and to assist in the development of the food and agricultural scientific and professional work force.

A compelling reason for reorganizing the four agencies into one mission area, and therefore bringing together the biological and physical sciences with the economic and statistical disciplines, was the realization that this would create synergies leading to a stronger research, education, and extension capacity in the Department; that it would facilitate greater multi-agency and interdisciplinary collaboration, resulting in more valuable and effective programs to address agricultural, food and nutrition, environmental quality, and rural development challenges facing the country.

I believe we are making the reorganization vision a reality, and our efforts are beginning to pay dividends. In a little more than two years, REE agencies have made great progress in meeting customer and Department challenges through heightened cooperation. Evidence of that collaboration is found in the fiscal year 1998 budget, as I will discuss in a moment. The budget includes several initiatives strengthened by participation of more than one REE agency.

More evidence of an increasingly effective Departmental research-education-extension capacity is found in mission area and agency activities related to implementation of the Government Performance and Results Act of 1993 (GPRA). Working together, the REE agencies are finding that GPRA affords us a valuable process for enhancing the effectiveness of our programs. It will also help us convey to our stakeholders, including Congress; the National Agricultural Research, Education, Extension, and Economics Advisory Board, which has specific GPRA-related responsibilities; and the general public, what the nation is getting for its investment in agricultural research and extension.

The mission area, collectively, and the REE agencies, individually, have developed draft strategic plans, framed by five general goals to which the mission area is com-

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mitted. The goals are: an agricultural system that is highly competitive in the global economy; a safe and secure food and fiber system; a healthy, well-nourished population; greater harmony between agriculture and the environment; and enhanced economic opportunity and quality of life for Americans. These goals are derived from the broad public debate that codified the purposes for agricultural research in the 1990 and 1996 Farm Bills. In addition, the REE and agency plans have been reviewed by REE stakeholders, partners, and customers. The mission area held three regional listening sessions at which stakeholders from industry, the academic community, public interest groups, farmers, ranchers, and others interested in REE programs provided useful feedback on the REE plan.

Continuing its implementation of GPRA, the mission area is nearing completion of a draft performance plan, framed by the five general goals of the strategic plans. During the spring, the REE agencies also will prepare individual performance plans using the framework of the REE performance plan.

Preparation of the strategic and performance plans, as might be expected, has been challenging. Particularly difficult is development of annual or even five-year performance goals and performance measures for fundamental research where potential payoffs are large but are realized over longer time horizons. Our general approach to GPRA performance measurement will be to use quantitative measures where appropriate, but not to lose sight of the qualitative factors that are ultimately so important in making judgments on the value of our work. Executive branch officials and appropriators have mutual interests in improving our systems for establishing goals, fixing accountability, measuring progress, and communicating success. We intend to carry out our responsibilities under GPRA with these points in mind. We look forward to consulting with this subcommittee as we move forward implementing GPRA.

REE'S FISCAL YEAR 1998 BUDGET

Now I would like to highlight the fiscal year 1998 budget for the Research, Education, and Economics mission area. The REE budget request for fiscal year 1998 is \$1.816 billion, a decrease of \$49 million or 2.6 percent from fiscal year 1997. I believe the budget, in total funding and specific initiatives, represents a sound balance among USDA's commitment to research, education, and extension investment and the Administration's commitment to a balanced budget. To get on the path to a balanced budget by fiscal year 2002, REE agencies, along with other department agencies, have had to make difficult decisions to reduce or terminate important programs in order to fund higher priority programs. However, through a careful assessment of priorities, funds for research actually increase by \$11 million or 1 percent.

Returns on investment in public agricultural research and development continue to be very strong. For example, the percentage of disposable personal income we spend on food continues to decline, reaching a low of 11 percent in 1995. This decline, sustained over many decades, has been possible in large part due to increases in agricultural productivity, which in turn is a product of research and development and a central reason for its continued support. Productivity growth has been higher in agriculture than most other sectors of the economy, with an average annual rate of 1.9 percent since the 1940's. Recently, our investments in agricultural research have resulted in new technologies that enable farmers to prevent adverse effects of production practices on the environment, to improve our capacity to prevent and detect food-borne contaminants, and to enhance the nutritional content of food. Studies, such as Huffman and Evenson's 1993 study *Science for Agriculture*, continue to find that the investment return on publicly-funded agricultural research and development is high and greater than for most other sectors. The returns for all research and development in agriculture are estimated to be 35 percent annually, while those for pre-technology or pre-development research—much of the kind of work funded through the National Research Initiative—are considerably higher.

REE AGENCY BUDGETS

The Agricultural Research Service (ARS) fiscal year 1998 budget stays essentially the same, \$800 million, as in the current fiscal year, although the fiscal year 1998 budget reflects adjustment of priorities leading to an increase of \$10 million in research and a commensurate decrease in buildings and facilities improvement funds. The budget also provides for redirected funding, making it possible for the agency to allocate a total of approximately \$30 million in increased funding for high priority research programs. As the principal intramural biological and physical science research agency in the Department, ARS continues to play a critical role for the Department and the larger agricultural community. Results from ARS's fundamental research provide the foundation of applied and development research carried out in

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many public and private institutions. The agency also draws on its fundamental research to conduct research directed at solving specific problems of national and regional importance and responding to the research needs of other USDA agencies.

The Cooperative State Research, Education, and Extension Service's (CSREES) budget decreases by \$69 million to \$840 million in fiscal year 1998. Funding for formula programs is held constant at fiscal year 1997 appropriated levels. The National Research Initiative (NRI) is increased by \$36 million, an increase of 38 percent. Decreased funding is proposed for earmarked special grants programs, buildings and facilities projects and selected extension programs. The Administration continues to believe that the NRI competitive grants program provides the most effective mechanism for eliciting and supporting the most meritorious science being conducted by public and private universities, Federal laboratories, and other research institutions and individuals across the country. This year's increase in the NRI will be focused on expanded research in three key areas: food safety, genetic enhancement of plants, and environmental quality. In providing critical funding to the research, education, and extension programs of the Land Grant Universities and other higher education institutions across the country, CSREES continues to play a central role in helping generate new knowledge and technology and facilitating the transfer of that knowledge and technology to those who can use it best.

The Economic Research Service's budget increases from \$53 million to \$54 million. As the Department's principal intramural economics and social science research agency, ERS conducts research and analysis on the efficiency, efficacy, and equity aspects of issues related to agriculture, food safety and nutrition, the environment, and rural development. In an era of an increasingly market-oriented agricultural sector, the need for economic analysis to understand the possible implications of any new developments in such areas as technology, policy, and trade agreements is critical for both public and private sector decision makers. The fiscal year 1998 budget provides funds to secure critical data to underpin that analysis.

Largely due to funding for the peak year of the Census of Agriculture, the National Agricultural Statistics Service (NASS) budget rises from \$100 million to \$120 million. Responsibility for the Census of Agriculture was transferred from the Department of Commerce to NASS as of October 1, 1996 and is being conducted under the agency's broad authority to conduct agricultural surveys. We are seeking specific authorizing legislation to clarify our authorities. I urge you to support swift passage of this legislation. The changes in agricultural policy in the 1996 Farm Bill make the need for NASS's statistical data program more essential than ever. Comprehensive, reliable, and timely data on U.S. agricultural commodities are critical for farmers, ranchers, and other agribusinesses to make informed production and marketing decisions in a highly competitive market. The new Census of Agriculture program at NASS complements its core program and affords the agency new program efficiencies benefiting the whole agency.

REE research activities soon will be enhanced by the Fund for Rural America mandated in the 1996 Farm Bill. In January of this year, the Department announced plans to allocate \$46.1 million of the Fund's \$100 million fiscal year 1997 funding for research, education, and extension activities. Projects that address international competitiveness, environmental stewardship, and rural community enhancement will be supported with \$33.3 million of these funds. The other \$12.8 million will be focused on Department priorities, including livestock concentration, food safety, nutrition, food recovery, and telecommunications. The grants will be awarded on a competitive basis for multi-disciplinary projects that address short-and intermediate-term issues. A request for proposals was published in January. Planning grants will be made in late spring; standard grants in early fall.

I want to stress the importance of the competitive process for making awards under this and other programs. Given the overall budget constraints, the enormous needs for science and technology to address agricultural-related issues and the general skepticism that characterizes attitudes toward so many publicly supported activities, it is important that we establish mechanisms to identify and support work on the highest priorities by the best performers.

REE FISCAL YEAR 1998 INITIATIVES

In developing the fiscal year 1998 budget request, we in REE have focused on those activities that reflect the nation's and the Administration's highest priorities. And we have targeted those activities for new or increased funding. Those fiscal year 1998 priorities include food safety, human nutrition, integrated pest management, emerging infectious diseases, the Census of Agriculture, and Children, Youth and Families At-Risk. The new initiatives or increases for on-going initiatives are closely aligned with the general goals of our strategic plans. While some involve

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only one REE agency, others take advantage of the complementary strengths of two or three. I would like briefly to discuss each of these initiatives and relate them to our general goals.

First, food safety. Our nation has the world's safest food supply, yet we continue to experience outbreaks of foodborne illnesses. Each year, foodborne diseases result in thousands of deaths, millions of illnesses, significant loss of productivity, and costly medical treatment nationwide and around the world. Enhancing our understanding of the basic science underlying these diseases and promoting development and adoption of food production, processing and handling practices that significantly reduce their incidence will advance the REE general goal of a safe and secure food and fiber system.

On January 25, 1997 the President unveiled a Food Safety Initiative that will move us in that direction. The President's \$43 million initiative not only focuses on inspection, surveillance, and rapid detection but also on research and education. Approximately \$8 million is included for REE agencies. Those funds will allow CSREES to launch a \$2 million food safety competitive special research grants program to expand the base of knowledge needed to address high priority food safety issues such as *Campylobacter*, *E. coli*, and salmonella. It will add \$4.1 million in ARS research into production, harvesting, and food handling practices that would reduce the incidence of exposure to microbial pathogens and improve methods to detect and survey the pathogens. Building on the CSREES competitive grants program and the ARS research component, the initiative provides CSREES \$2 million in additional funds for its Food Safety Extension Program to further enhance food safety education programs, such as compliance education, State food handler certification, and rapid exchange of food safety information. Complementing this Administration initiative, food safety will be one of three priority areas targeted for NRI increases in the CSREES budget.

A second national initiative supported with fiscal year 1998 funding addresses human nutrition. It is increasingly clear that diet and the nutritional content of food have a profound effect on human growth, development, and life-long health. Yet our knowledge in these areas is limited. We know that proper nutrition can reduce the risk of chronic diseases of aging, such as heart disease, cancer, osteoporosis, diabetes, hypertension, and obesity, but we still have a limited understanding of these relationships. Contributing to the REE general goal of a healthy and well-nourished population, this initiative includes \$12 million in the first of a new multi-year initiative to significantly increase the ARS research capacity at its six national nutrition research centers. In this first year, half the funds will support research to further understand human dietary requirements, with an emphasis on how nutrition relates to cognitive development in children. The other half will fund a survey of food consumption by infants and children to be used by the Department and the Environmental Protection Agency (EPA) to assess dietary exposures to pesticides and establish pesticide residue tolerance levels on agricultural commodities in accordance with the Food Quality Protection Act of 1996. The overall human nutrition initiative not only promises to increase our understanding of how food affects health, but has other beneficial effects as well. The knowledge gained will help set the research agenda for animal and plant breeding. And promoting a healthier population can indirectly help our economy by reducing medical costs and productivity losses due to illness.

USDA's germplasm collections, supported by ARS, underpin much of the cutting edge research currently being conducted in crop and animal breeding and other biotechnology research to develop crops and livestock that are resistant to disease, pests, and stress due to adverse growing conditions. The collections are the source of important traits that can be used in developing new crop varieties and animal breeds with desirable characteristics. The \$2 million funding increase in the germplasm initiative will allow us to fill gaps in our National Plant Germplasm System, preserving valuable plant and microbial germplasm. In so doing, we will be facilitating the science that supports several REE goals, including a secure production system and increased commodity production. Research on genetic enhancement of plants is also a priority area for the proposed NRI increase.

This fiscal year 1998 budget also includes funds to continue implementation of USDA's Integrated Pest Management Initiative (IPM), a multi-agency effort to develop environmentally-valuable IPM strategies and bring 75 percent of the nation's cropland under integrated pest management practices by the year 2000. In developing and promoting the adoption of pest management strategies that carefully balance environmental quality goals with producers' need to have economically viable enterprises, this initiative is focused squarely on achieving the REE general goal of enhanced harmony between agriculture and the environment. As part of this initiative, the ARS budget includes \$3 million for research that will focus on biological

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control of pests. Another \$1 million increase will permit ARS to conduct area-wide and pilot test programs on ARS-developed technology ready for large-area demonstrations. Increased IPM funding will allow CSREES to increase research and extension support of regional IPM development and implementation projects and research to develop pest management alternatives to replace pest control technologies under consideration for regulatory action by EPA. For the Economic Research Service, the initiative includes an increase to support empirical analysis of the relationships among adoption of conserving farm practices, economic incentives, and environmental protection, recognizing that ultimate adoption of IPM strategies depends heavily on their economic implications for producers. A priority research area for the requested increase in the NRI will be environmentally-oriented research.

The threat of emerging infectious diseases and exotic pests is the focus of another new initiative that will contribute to the REE general goal of a safe and secure food and fiber system. Whether a threat to livestock and the safety of our food supply, such as "Mad Cow Disease" or to plants, such as Karnal bunt, the introduction of foreign diseases and exotic pests can pose a threat to consumer confidence and raise the potential for economic disruption of production. As part of the Administration's Emerging Infectious Diseases Initiative, the budget includes an increase of \$2.5 million for research on both domestic and exotic emerging diseases of livestock, focusing on understanding how the pathogens are transmitted, what production conditions contribute to their incidence, and development of detection methods. A second \$2.5 million will be devoted to developing methods to detect and strategies to control important emerging plant diseases, such as Karnal bunt, a wheat disease found in the U.S. for the first time in March 1996.

As the agriculture sector becomes more market-oriented and more dependent on exports, the need for good information on that sector, including production and markets, is greater than ever. Reliable data is a prerequisite for the nation to have an agricultural sector that is highly competitive in the global economy, one of the REE general goals. This need exists for producers and others who want to make informed decisions as they buy and sell in commodity markets, as well as for public decision makers who need good information to make informed decisions on public policies and programs. An important source of such information is the Census of Agriculture. Every five years the Census provides comprehensive statistical information on the agricultural sector of the economy at the National, State, and county level. Because of the six-year Census funding cycle, the funding level required to support the Census program varies from year to year. We appreciate the committee's support for our request for funding last year. We are seeking an additional \$18.5 million in fiscal year 1998 for the fourth-and peak-year costs for final preparation of questionnaires, data collection, and processing of 3.5 million Census forms.

Consistent with the President's commitment to improving our children's education, the fiscal year 1998 budget includes increased funding to expand CSREES's Children, Youth and Families At Risk (CYFAR) program. Designed to ultimately empower youth, parents, and community leaders to take responsibility for their own lives and that of their community, the additional funding of \$2.1 million will be focused on enhancing statewide Extension capacity for developing and supporting community-based programs for at-risk children and families. In so doing, this initiative contributes to the REE general goal of enhancing economic opportunity and quality of life for Americans, particularly Americans who for one reason or another are not taking advantage of the economic and other opportunities found in their communities. This increase restores funding for CYFAR to its fiscal year 1995 level and provides an additional \$1.7 million to be targeted to the 1890 Institutions now eligible to receive Smith Lever 3(d) funding directly.

These are the highlights of six initiatives in the REE budget. A full discussion of them can be found in the agencies' Explanatory Notes.

BUILDING AND FACILITIES PROGRAM

I mentioned earlier the slight decrease in the collective REE agency budgets. This is due largely to reductions in the ARS and CSREES budgets for building and modernization of research facilities. The funding level for buildings and facilities decreases by \$72 million, \$10 million in ARS and \$62 million in CSREES. Given the overall constraints within which we developed the REE budget, we continue to believe that the Federal government should generally leave the investment decisions on university facilities to State and institution-level decisionmakers. In addition to the significant capital commitments, these facility decisions entail major commitments for programming, operations, and maintenance, commitments that Federal-level officials are not in a position to make.

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The Subcommittee should be aware that we are moving ahead on the Strategic Planning Task Force mandated in the 1996 Farm Bill. Under the Farm Bill provision, the Secretary of Agriculture is to establish a Task Force to prepare a 10-year strategic plan for guiding future Federal investment for constructing, renovating, consolidating, and, if appropriate, closing agricultural research facilities. The Secretary will be announcing the membership of the Task Force within a few weeks. The Task Force will have two years to conduct a thorough study of the building and facilities needs of the agricultural research system and the capacity of the current facilities to meet those needs and, from that assessment, develop the 10-year plan.

While we look forward to the recommendations of the Task Force, nevertheless we believe we must move forward now on several projects where needs are critical and immediate. We believe our reasoning for funding these few crucial improvements is sound and would be consistent with any future Task Force recommendations. The budget contains \$23 million in funding for the U.S. Horticultural Crop and Water Management Research Laboratory in Parlier, California. The product of careful planning over several years, the new facility will allow consolidation of several outmoded facilities and yield significant efficiencies when compared to current operating costs. The Melaleuca Research and Quarantine Facility at Ft. Lauderdale, Florida, reflects a continuing Administration commitment to restoration of the Everglades ecosystem and was designated by the Administration's South Florida Ecosystem Task Force as a top priority. Melaleuca, an exotic weed tree, is adversely affecting much of South Florida's fragile wetlands. This funding, coupled with proposed research funding, will accelerate integration of biological control technology into Melaleuca management efforts.

The budget also includes funding for a new facility in Montpellier, France to house the European Biological Control Laboratory. The new facility will replace crowded and dispersed temporary facilities that seriously impede the Laboratory's program focused on discovering and developing biological control agents for insect pests and weeds in the U. S. that immigrated from Eurasia, the Middle East, and North Africa and now seriously threaten U.S. agriculture. The new European laboratory is essential to ensure future success of many domestic laboratory programs directed toward biological control of agricultural pests, including salt cedar, knapweeds, Russian wheat aphid, and many other invasive insects and weeds. All other buildings and facilities funding in the budget is for modernization of selected ARS facilities. All the facilities designated for modernization currently have serious deficiencies that are barriers to conducting efficient and effective research.

SUMMARY

In summary, I want to emphasize that this budget, while very tight, represents a continued recognition of the value of and commensurate commitment to investment in agriculture research, statistics, education, and extension. If U.S. agriculture is to continue to be a dynamic, competitive sector in the global economy, and we as consumers are to continue to harvest the fruits of agriculture's historical success, then our national commitment to research, education, and extension must continue. I thank you for this opportunity to share with you my thoughts about the mission area and its agencies' budgets. We welcome your questions.

PREPARED STATEMENT OF DR. EDWARD B. KNIPLING

Mr. Chairman, and members of the Subcommittee. I appreciate this opportunity to present the Agricultural Research Service's budget recommendations for fiscal year 1998, and highlight some of the Agency's accomplishments of the past year.

In the past, the Congress has provided strong support for ARS and its research mission. We appreciate the fact that this Subcommittee has been instrumental in marshaling critical resources for USDA research. Attaining national goals of a healthier population, environment quality, and economic prosperity will require continuing the Nation's commitment and investment in agricultural research.

The research that ARS performs, in the areas of health, environment, and agricultural competitiveness, are more important than ever. Projected population and economic growth over the next half century will require world food production to double. Meeting this demand will require new crops and new methods to maximize crop and livestock yields consistent with recognized needs for environmental stewardship.

Research can help the nation meet the food demands of the growing population as well as address our food safety and environmental goals. Research in genetics is producing increased crop yields by developing crops that can resist disease, insects, and frost. Through genetic engineering, traits that retard spoilage are being

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introduced to reduce postharvest losses and costs, and increase the availability of wholesome food. Genome maps will make it possible to identify gene codes for specifically desired traits, such as lower fat content in meat animals. With genome maps, scientists will also be able to produce safer food by breeding animals resistant to foodborne pathogens, such as *E. coli* 0157:H7 and *Salmonella*.

E. coli and *Salmonella* are two of the most prominent bacteria associated with serious foodborne illnesses. *Campylobacter* causes an estimated two million cases of illness each year. Another 800 Americans become seriously ill each year from *Listeria monocytogenes*. The Centers for Disease Control estimate that foodborne pathogens cause millions of illnesses and contribute to thousands of deaths annually. Medical costs and productivity losses total from \$5 to \$13 billion per year.

ARS scientists are hard at work to help ensure a safe, adequate, and sustainable food supply. To reduce pathogen contamination in the slaughter and processing of meat and poultry products, a Hazard Analysis and Critical Control Point (HACCP) system is being implemented. ARS is supporting that effort by identifying critical points of pathogen contamination, and points where they can be reduced or eliminated. The science-based HACCP system represents a significant improvement over previous organoleptic systems which used sight, sound, smell and touch to test the end-product for wholesomeness.

For example, faster, more accurate tests are being developed to combat *E. coli* 0157:H7. Traditional tests for this foodborne bacteria are time consuming and technically difficult to conduct, thus limiting their usefulness. ARS scientists at Clay Center, Nebraska devised a simple, rapid diagnostic test which will increase the testing of meat and meat products, and substantially improve food safety. Numerous other systems and technologies are being developed in both pre- and post-harvest areas to reduce foodborne pathogens.

Our food supply is also being increasingly threatened by new and emerging plant diseases and pests that affect the approximately 150 crops grown in the United States. Exotic organisms, once introduced into this country, can explode into an epidemic. Just a few examples: *Karnal bunt* disease of wheat has seriously disrupted the export market for wheat growers in the southwestern U.S. *Head scab* of wheat and barley has caused an estimated \$2 billion in losses since 1993. *Barley stripe rust*, which first appeared in Texas in 1991, has spread throughout the western U.S. *Soybean rust*, a disease recently discovered in Hawaii, is expected to cause serious losses should it migrate to the mainland. And noxious and invasive exotic weeds which already infest 17 million acres of public lands are expected to double in five years.

Strategies for controlling emerging diseases and exotic pests include the development of new and rapid tests for detection, containment, and eradication. One of the strategies ARS is employing involves Integrated Pest Management (IPM). As crop yields increase and production systems change, the importance of protection from pests increases. To maintain good stewardship over the environment, strategies for pest management must shift from primary reliance on chemicals to IPM strategies which combine multiple approaches, conserve natural controls, and utilize chemicals when other means of control have failed.

USDA has established an ambitious goal of deploying IPM on 75 percent of the Nation's crop acreage by the year 2000. Reaching this goal will result in reducing environmental damage, particularly to the water supply which can be contaminated by runoff from farms. AMS/PDP samples tend to find no, or very low, residue. These pest management strategies will be more cost-effective and sustainable over the long term. The Food Quality Protection Act of 1996 may lead to tighter controls on pesticides registered by EPA (due to tolerance reassessment?) and farmers will have even greater need for the alternative pest control technologies developed by and through USDA programs in the IPM initiative.

Human nutrition plays a critical role in growth and development, and good nutrition enhances an individual's productivity and quality of life. Poor nutrition underlies many chronic conditions, such as obesity, cardiovascular disease, cancer, osteoporosis, and diabetes. Research is only now beginning to reveal how nutrients and genes interact to cause various diseases. As the lead Federal agency in human nutrition research, ARS scientists are researching the relationships between diet and resistance to diseases, and determining the nutritional needs of specific population groups, including infants, children, and the elderly.

The agriculture-food sector is the country's largest industry, responsible for over 15 percent of the Gross Domestic Product. U.S. agricultural exports are projected to exceed agricultural imports by \$30.5 billion in 1996. Employment in the U.S. food and fiber system represented 18 percent of all civilian jobs in the U.S. in 1995.

Over the past several years, ARS requests for funding increases for genetics, food safety, human nutrition, environmental quality, and IPM research have been sup-

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ported by this Committee. During these same years, ARS has also redirected base funds to finance these critical initiatives.

In fiscal year 1998, ARS requests the Congress' continued support for research—research which would increase crop and livestock yields, improve food safety and nutrition, optimize the preservation of land and water resources, and promote agricultural sustainability.

The Nation faces many challenges as this century draws to a close and it moves into the 21st century—challenges to health and safety, environment, and economy arising from a growing world population, an increasing number of emerging diseases and pests, and an ever more demanding concern for the environment. The ability to meet these challenges depends upon the decisions that are made today.

ARS STRATEGIC PLAN

All of the research that ARS currently performs and the research initiatives ARS proposes to conduct in fiscal year 1998 meet one or more of the Agency's five Strategic Plan goals. They are to provide research which:

- (1) Ensures the Nation an agricultural system that is highly competitive in the global economy.
- (2) Maintains a safe and secure food and fiber system.
- (3) Maintains a healthy, well nourished population.
- (4) Promotes greater harmony between agriculture and the environment.
- (5) Enhances economic opportunities and quality of life for Americans.

Let me take a minute to identify where ARS' research programs fall within these goals. The first goal includes research on cost-effective agricultural production systems, postharvest control of pests, new uses and products, and new and alternative crops. The second goal includes ARS' pre- and postharvest food safety research. It also includes research on plant and animal production systems, product quality, reproduction and biological processes, germplasm and genetic resources, and other research designed to ensure the security of U.S. food and fiber production. All ARS' human nutrition research falls under the third goal. The fourth goal includes research on natural resources, waste management, integrated agricultural production systems, cropland and grazingland sustainability, environmentally safe pest management, and global change. And the fifth goal includes research which expands economic opportunities to rural communities by providing new crops, products and technologies; expanding markets; making small-scale processing capabilities available, and sharing new knowledge through information access and technology transfer.

These five broad goals are part of a draft Strategic Plan ARS has developed in response to the Government Performance and Results Act of 1993. ARS' Plan establishes the broad structure for setting Agency research priorities and allocating resources over the next five fiscal years. It also provides for a broad framework for systematically evaluating the impacts or outcomes of ARS' research programs.

FISCAL YEAR 1998 BUDGET

ARS proposes funding of \$726,797,000 for fiscal year 1998, an increase of \$9,971,000 over the fiscal year 1997 appropriation level. The fiscal year 1998 Budget includes increases for selected research initiatives which build upon ARS' base and contribute to the Nation's economic well-being and quality of life. To help finance these initiatives, ARS is recommending the elimination of important but lesser priority research projects. In addition, ARS is recommending modest increases for pay costs which will be partially offset by proposed reductions in staff years.

Under its Buildings and Facilities account, ARS proposes \$59,300,000 for fiscal year 1998. These funds will be used to continue the ARS facilities' replacement and modernization program.

PROPOSED RESEARCH INITIATIVES

ARS is requesting \$36,523,000 for new and expanded research initiatives, and increased pay costs. These initiatives cover an array of national research needs which directly respond to Administration and Congressional priorities. They respond to the priorities of enhancing the national economy and trade, preserving the environment, and providing for a healthy citizenry.

Food Safety (\$4,114,000).—As part of the Administration's Food Safety Initiative, ARS is proposing \$4,114,000 for pre- and post-harvest food safety research. Further research into food-production, harvesting, and handling practices that will reduce human exposure to microbial pathogens, chemicals, and biotoxins—as well as into improved methods to detect and survey these hazards—can eliminate or significantly reduce an important cause of illness in the U.S. ARS proposes \$1,614,000 for

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additional research in preharvest food safety. The research will develop methods and strategies for detecting and controlling pathogens in the production of live animals to prevent the contamination of meat and poultry products.

Postharvest operations, that is slaughter and processing, can be a source of contamination of meat and poultry products. These operations offer opportunities for intervention to prevent further spread of pathogens to food products. ARS is recommending an increase of \$2,500,000 in postharvest food safety, for the development of advanced systems and new technologies that prevent or reduce pathogen contamination of meat, poultry, and egg products. The research will also provide technologies to reduce pathogens in fruits and vegetables.

Emerging Diseases/Exotic Pests (\$5,000,000).—The introduction of foreign animal diseases, incidence of diseases transmitted from animals to humans, and prevalence of meatborne food pathogens have increased dramatically over the past five years. Prevention and control of emerging animal diseases can avoid economic disruptions and loss of consumer confidence like that caused by *Bovine Spongiform Encephalopathy* (“Mad Cow Disease”) in Great Britain. Measures to control organisms affecting humans, such as *E. coli* 0157:H7, *Salmonella*, *Cryptosporidium*, *Lyme disease*, and *Hantavirus disease* will prevent serious illness and disease. One-half of the proposed increase will be used to research emerging exotic diseases of livestock, and emerging domestic and zoonotic diseases of livestock.

The other half of the proposed increase will be used to fund research on emerging plant diseases, and noxious and invasive weeds. With rapidly expanding international commerce and travel, the introduction of new pests and diseases into U.S. agriculture is more ominous and threatening. For example, the silverleaf whitefly which invaded the U.S. in the 1980’s, now attacks hundreds of plant species including important agricultural species such as cotton and vegetable crops. *Karnal bunt* disease of wheat, which was first recognized in the U.S. in 1996, has seriously disrupted the wheat market for growers in the southwestern U.S.

Grazinglands (\$1,000,000).—Grazinglands which include irrigated pastures, perennial forage crops, and the prairies and arid rangelands of the West cover about half of the Nation’s land surface. They also encompass most of the country’s wildlife habitat. Most of our water for industry, domestic use, and irrigated agriculture comes from grazed watersheds. Grazinglands support about 100 million beef cattle, 10 million dairy cattle, and 11 million sheep. They also provide food and fiber for domestic consumption and export, and directly support the economies of rural communities.

Despite the importance of grazinglands, critical gaps exist in the knowledge required to develop better management technologies. More efficient and profitable forage production systems are essential for U.S. agricultural production to remain competitive. New knowledge and technology is needed for mitigating the impacts of intensive forage/livestock production systems. The proposed increase will be used to produce more profitable forage/livestock production systems while minimizing environmental impacts.

Genetic Resources (\$2,000,000).—USDA’s plant germplasm collections underpin crop breeding efforts in this country. The collections are the sources of important crop characteristics, such as host plant resistance to combat pests and stresses. The National Plant Germplasm System (NPGS) presently maintains over 450,000 different germplasm samples. Of the proposed increase, \$1,500,000 will be used to fill gaps in the NPGS collection, and to preserve rare and unique germplasm samples.

Microorganisms can play positive roles in the soil and the detoxification of the environment, nitrogen fixation in lieu of chemical fertilizers, insect control, and decomposition of organic wastes. Other pathogenic strains of microorganisms are destructive to crops and livestock. Plant breeders need to have access to the strain diversity of important diseases affecting crops in order to build broad spectrum host resistance. Veterinarians also need access to pathogenic strains to develop effective vaccines to protect live animals. Numerous valuable microorganisms will be lost soon unless a concerted effort is made to acquire, document, and preserve them. Of the proposed increase, \$500,000 is recommended for preservation of a microbial germplasm collection.

Integrated Pest Management (\$4,000,000).—USDA has established a goal of deploying IPM on 75 percent of the Nation’s croplands by the year 2000. Two kinds of research are needed to meet this goal. First, basic studies are needed that generate new fundamental knowledge, with a focus on pests and the means of controlling them. Second, a more holistic, systems-oriented approach is needed to put together the components of an IPM strategy in the best combination. The proposed increase will focus on areawide IPM and pilot test programs; augmentative and biologically-based IPM in field, horticultural and vegetable crops; and host-plant resistance and pest management strategies.

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South Florida Ecosystem Restoration (\$2,000,000). In 1993, a 5-year Interagency Agreement on South Florida Ecosystem Restoration was signed by the Departments of Interior, Commerce, Army, Justice, Agriculture, and EPA. As part of a task force, the Department of Agriculture has been asked to perform research to resolve the ecological, hydrological, and agricultural problems which hinder sustainable agricultural production in the Everglades Agricultural Area. The requested funds will be used to develop management strategies and biological agents for the control of *melaleuca* and other harmful nonindigenous species. Related to this initiative, ARS is also requesting \$4,000,000 for construction of a quarantine facility in Ft. Lauderdale.

Human Nutrition (\$12,000,000).—ARS is the lead Federal agency for human nutrition research. The Agency has the infrastructure and scientists required to improve the nutritional health of all Americans, a goal of this Administration.

Nutrition has a profound effect on human growth and development, yet there is only limited knowledge in this area. Additional research is needed to understand how proper nutrition can prevent the development of lifelong nutritional deficiencies that lead to chronic diseases, such as obesity, heart disease, cancer, osteoporosis, and diabetes. Similarly, research is needed to understand the nutritional requirements that promote health and enhance quality of life.

Half of the proposed increase will be used to fund research to further understand dietary requirements. The other half of the proposed increase will fund a survey of food consumption by infants and children. The survey has been requested by the EPA which is concerned that current food consumption data do not provide sufficient sample sizes to adequately estimate pesticide intakes by children.

In addition to the proposed research initiatives, ARS is also recommending \$6,409,000 to finance anticipated fiscal year 1998 Federal pay raises and associated costs.

PROJECT TERMINATIONS AND STAFF YEAR REDUCTIONS

In order to meet Administration streamlining goals, the Agency is proposing a decrease of \$3,500,000 consistent with the reduction of Agency staff years. To help finance the fiscal year 1998 proposed research initiatives, ARS is recommending the termination and reallocation of selected research projects totaling \$23,023,000. These projects represent important but lesser priority research projects. The termination of these projects, along with additional funding for the proposed increases, will enable ARS to more sharply focus its limited resources on national research priorities identified in the fiscal year 1998 Budget Estimates.

BUILDINGS AND FACILITIES

Many of ARS' facilities are inefficient and outdated. Major systems (i.e., water, heating, ventilation air-conditioning, electrical, etc.) in many of ARS' facilities have long passed their useful life expectancy and fail to meet building code requirements. The modernization or replacement of these facilities which began several years ago remains a high priority.

In fiscal year 1998, ARS recommends under its Buildings and Facilities account a total of \$59,300,000 for continuing the modernization or replacement of selected laboratories and facilities.

Beltsville Agricultural Research Center, Beltsville, Maryland (\$3,200,000).—The Center is recognized as one of the largest agricultural research centers in the world, in both program scope and concentration of scientists. Over 300 scientists and 1200 support personnel work at the Center on programs in animal and plant productivity, natural resources and environmental sciences, product quality, and human nutrition. Modernization of the Center began in fiscal year 1985. Funding will be used to continue the modernization program, including miscellaneous small projects and contingencies.

National Center for Agricultural Utilization Research, Peoria, Illinois (\$3,000,000).—The Center performs vital research on new agricultural uses and food safety. Funding will be for continuation of the facility modernization program, specifically for renovation of the North Wing.

Eastern Regional Research Center, Philadelphia, Pennsylvania (\$5,200,000).—The Center conducts critical research on new uses for farm commodities that leads to the development of new domestic and foreign markets. A facility condition study indicated that the utilities and building infrastructure have reached the end of their usefulness. A modernization program was developed and divided into 9 phases. The proposed funding will be used for construction of phase 4 of the Chemical Wing laboratory.

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Southern Regional Research Center, New Orleans, Louisiana (\$1,100,000).—The Center performs research on postharvest processing, product enhancement, and safety and use of agricultural commodities. The Center research includes: improving the quality of cotton products, and the safety and health of cotton workers; increasing the efficiency of food-processing systems; and enhancing the nutritional value of food products, such as rice and peanuts. The proposed funding will be used to continue with the modernization of the Center, specifically to begin the design of the Industrial Wing.

Plum Island Animal Disease Center, Greenport, New York (\$5,000,000).—The Center conducts research and diagnostic work on foreign animal diseases that are an ongoing threat to U.S. livestock. It is the only site in this country authorized by Congress to carry out such research. Funding will be for continuation of the modernization of the Center, principally replacement of the boiler plant and miscellaneous projects.

U.S. Horticultural Crops and Water Management Research Laboratory, Parlier, California (\$23,400,000).—The proposed funding will be used to finance the construction of a replacement laboratory in Parlier. The U.S. Horticultural Crops and Water Management Research Laboratory which investigates problems related to Western production and postharvest agriculture is currently in Fresno. New housing developments to be built one quarter mile from the laboratory has placed restrictions on agricultural spraying which makes the present site unsuitable for research activities.

Melaleuca Research and Quarantine Facility, Ft. Lauderdale, Florida (\$4,000,000).—*Melaleuca* is adversely affecting Lake Okeechobee, the Everglades National Park, and Big Cypress National Preserve. This weed tree reduces wildlife and native vegetation, pumps large quantities of water into the air via evapotranspiration, and is a navigational and fire hazard. The proposed funding is for construction of a facility which will serve as the quarantine facility for *melaleuca* biological control insects brought into the United States from Australia. Construction of this facility was designated by the South Florida Ecosystem Restoration Task Force as one of the highest priority initiatives to ensure restoration of the Everglades National Park.

National Agricultural Library, Beltsville, Maryland (\$6,000,000).—NAL, which is the largest agricultural library in the world, serves as a national resource for access to information on agriculture and related sciences. Built in 1968, many of the building systems are becoming unreliable and require replacement. A facility condition study identified numerous code, mechanical, electrical, and architectural deficiencies. The proposed funding will be used to begin addressing some of the major deficiencies, including installation of sprinklers, first floor renovations, replacement of boilers, and miscellaneous projects.

European Biological Control Laboratory, Montpellier, France (\$3,400,000).—Many of the insects pests and weeds in the U.S. are of European or Asian origin. The insect pests attack crops and domestic animals, ornamentals, and forests; the weeds infest millions of acres of pasture and croplands. The Laboratory researches and introduces suitable natural enemies (i.e., insects, mites, and pathogens) into the U.S. to control insect pests and weeds. Currently, the Laboratory is housed in temporary facilities which are crowded and dispersed. In addition, there is no quarantine greenhouse. Purchase of a new laboratory site, and planning and design of the new facility has been completed. The proposed funding will be used to proceed with construction.

Mr. Chairman, this concludes my statement. I will be happy to respond to any questions you may have.

PREPARED STATEMENT OF DR. B.H. ROBINSON

The mission of CSREES is to benefit people, communities, and the Nation through cooperative work with our partners and customers to advance research, extension, and higher education in the food and agricultural sciences and in related environmental and human sciences. CSREES is a Federal partner in a partnership that includes the 59 State and Territorial Agricultural Experiment Stations; the 17 1890 land-grant institutions, including Tuskegee University; the 63 Forestry Schools; the 27 Colleges of Veterinary Medicine; 42 Schools of Home Economics; and the 29 Native American Institutions which now have land-grant status.

In addition to the land-grant partners, CSREES has partners in virtually all segments of the agricultural community, including private and public colleges and universities; Federal laboratories; private industry; State, county, and local governments and entities; and individuals. The Cooperative Extension Services, our state

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partners for extension programs at the land-grant universities, link the education and research resources of the U.S. Department of Agriculture and the land-grant universities with 3,150 county and administrative units throughout the country.

This is certainly an indicator of the breadth of the partnership to which we belong. In fact, we look forward to further expansion of that partnership to include Hispanic-Serving Institutions with the initiation in 1997 of the our new Hispanic-Serving Institutions Grant Program. This array of CSREES partners assures that the best and most diverse talents are tapped to address current and future problems facing agriculture and rural America, particularly as we prepare for the 21st Century.

The research, extension, and education components of the partnership interact to provide coordinated approaches to problems of regional and national interest. Our land-grant universities and other partners conduct fundamental and applied research to provide the knowledge required to combat problems encountered in the development and sustainability of agriculture and forestry and in the improvement of the economic and social welfare of rural and urban citizens. Our land-grant partners, through the Cooperative Extension System, funnel this research to a network of nonformal educational, or extension, programs. This knowledge is used as a basis for practical decisionmaking to strengthen and sustain individuals, families, and rural and urban communities throughout the Nation. And, finally, recognizing that education is the catalyst for moving this nation successfully into the next century, CSREES supports several integrated higher education programs to stimulate and enable colleges and universities to provide the quality of education necessary to strengthen and replenish the nation's food and agricultural scientific and professional work force.

Changes in agriculture and the world in which we live have necessitated that the programs we administer and the client base we serve be broadened. While the scope and complexities of our programs have expanded, CSREES has continued to operate on extremely low administrative costs of about 3–4 percent. This indicates that we function effectively on a very small percentage of an annual appropriation of approximately \$900 million, making maximum program funding available to the American public through our partners.

As CSREES enters its third year after the merger of two former agencies, the Cooperative State Research Service and the Extension Service, we have been successful in meeting many of the early challenges facing us to find innovative and efficient approaches to integrating extension programs with parallel research programs. We have strived to link research and extension objectives under single programs where appropriate.

One example of our efforts to integrate research and extension objectives is the food safety area. The public is demanding, and should be assured of, a safe, high-quality food supply. Finding ways to reduce or eliminate food-borne risks spans both research and extension, from developing risk minimizing practices in growing animals and crops, attending to safety issues, including proper pre- and post-harvest practices, to introducing food processing methods at plants that incorporate pathogen reduction and Hazard Analysis and Critical Control Point (HACCP) measures, to handling the food safely during transportation and distribution and, finally, to promoting safe food handling by the consumer.

Food safety is one of three broad categories of research which is proposed for increased funding in 1998 under our National Research Initiative (NRI) Program. In addition, we are requesting funding in 1998 for a new competitive Food Safety Special Research Grant. Food safety is also one of the Cooperative Extension System's National Initiatives, and extension activities in food safety are funded under Smith-Lever 3(d) funds. Our goal is that these programs will complement each other to foster multi-disciplinary collaboration and participation from diverse sectors to solve complex food safety issues, provide the basis for new training programs and, ultimately, assure public health.

Other examples of parallel extension and research programs that we have been integrating are Water Quality, Sustainable Agriculture, Integrated Pest Management, and Pesticide Impact Assessment. Coordinating and integrating extension, research, and higher education activities effectively at the national level to solve critical issues faced by the agricultural community can only be achieved in cooperation with the university system and other partners.

The Congressionally mandated Government Performance and Results Act (GPRA) requires that Federal agencies develop strategic plans that correlate to the formulation of agency budget requests and that adhere to the "management for results" concept. The draft CSREES Strategic Plan outlines our expectations for agricultural research, education, and extension for a five-year period from 1997–2002. It also pro-

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vides a mechanism for assessing and redirecting agency programs to achieve strategic goals.

CSREES is one of four agencies in USDA's Research, Education, and Economics (REE) Mission Area. The draft CSREES Strategic Plan is linked to five broad goals or outcomes for the plan of the REE Mission Area and represents the work of our administrative and program staff and partners with input at the Federal, State and local levels.

The broad goals or outcomes of the REE Mission Area are the underpinnings from which CSREES has and will continue to initiate program strategies which will be explicitly stated in the annual performance plans. These strategies, in combination with program action and implementation by the university system and other partners, will lead to joint accomplishments in research, extension, and higher education in the food and agricultural sciences and related environmental and human sciences. The five broad goals or outcomes of the REE Mission Area are: An agricultural production system that is highly competitive in the global economy; a safe and secure food and fiber system; healthy, well-nourished population; greater harmony between agriculture and the environment; and enhanced economic opportunity and quality of life for Americans.

Framed by the same goals, our draft Strategic Plan focuses on planning and attaining measurable outcomes and allows for the accountability of funds in response to shared priorities for work at the national and State levels. Of course, our Strategic Plan will be an ever-changing document.

With input from the university system and other partners, the Strategic Plan will be continuously reviewed and updated to respond to new and emerging issues important to the citizens and the Nation.

FISCAL YEAR 1998 BUDGET REQUEST

The budget submitted to Congress by the President requests \$840,153,000 for the Cooperative State Research, Education, and Extension Service. This is a decrease of \$69.2 million, or approximately 8 percent, from the current appropriation. Budget highlights are provided below:

FOOD SAFETY

Reducing the incidence of food-borne illness is a top priority of the Administration. On January 25, 1997, President Clinton announced an interagency Food Safety Initiative in which USDA, including CSREES, is an important participant. As part of the Administration's Initiative, CSREES is requesting \$2 million in fiscal year 1998 to establish a new competitive Ensuring Food Safety Special Research Program. Foodborne pathogens such as *E. coli*, and water-borne pathogens such as *Cryptosporidium*, have become major threats to public health. These threats and those of other new and re-emerging infectious diseases that affect our food supply mandate that we enhance and expand our existing programs in food safety to find ways to reduce and eliminate food-borne diseases. USDA's action agencies, including the Food Safety and Inspection Service, look increasingly to research programs to provide scientific information on which to base their regulatory and policy decisions about these issues. This addition to the CSREES funding portfolio would expand the base of knowledge needed to address high priority food safety issues facing industry and consumers.

The new Ensuring Food Safety Special Research Grant program will consider pre- and post-harvest/slaughter issues related to biological aspects of food safety, reductions in microbials and pathogens, as well as the social and economic implications of ensuring a safe food supply. It will complement the longer term, more fundamental food safety research supported under our NRI Program, the more longer-term food safety research programs of ARS, and the food safety education and training programs supported under the extension portion of our budget.

We also are proposing a \$2 million increase for our parallel extension Food Safety Program funded under Smith-Lever 3(d) as part of the Food Safety Initiative. Currently, food safety extension activities address a wide variety of food safety and quality issues nationwide. The funding increase for these activities will be used to further enhance food safety education programs with outcomes focused on pre-harvest education; Hazard Analysis and Critical Control Point (HACCP) and other Quality Assurance programs; compliance education; state food handler certification programs; increased use of recommended safe food handling practices by industry and consumers; and rapid exchange of food safety information.

The funding proposed for these two programs will help provide the critical link between food safety research and education by supporting joint priority planning and programming, and increased multidisciplinary collaboration and participation

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among researchers and educators. These activities will directly promote two of the REE Mission Area Goals: a safe and secure food and fiber system; and a healthy, well-nourished population.

PEST CONTROL PROGRAMS

The Integrated Pest Management (IPM) program is another example of the substantial progress we have made in integrating parallel research and extension programs. The research activities supported with IPM funds will develop new pest management tools to address identified critical pest problems in crop production and will focus on implementing ecologically-based pest management tactics. The extension activities supported with IPM funds will accelerate the transfer of proven pest management technologies from the researchers to farmers, crop consultants, ranchers, and other end-users to increase profitability while protecting human health and our environment.

Increases are requested for Improved Pest Control funding to support these research programs: Pest Management Alternatives (formerly, Emerging Pest and Disease Issues), Integrated Pest Management, Expert IPM Decision Support System, Minor Crop Pest Management (formerly, Pesticide Clearance), and Pesticide Impact Assessment. Funds are included for extension activities under the IPM and Pesticide Impact Assessment programs. Activities supported under these programs directly contribute to the Department's IPM Initiative which calls for implementation of IPM practices on 75 percent of U.S. crop acreage by the year 2000. The budget includes increases totalling \$17.3 million for these research and extension pest management and pesticide related programs.

The activities supported by the CSREES Pest Control Programs will directly promote the following REE Mission Area goals: an agricultural production system that is highly competitive in the global economy; and greater harmony between agriculture and the environment.

PESTICIDE APPLICATOR TRAINING

We are proposing an increase of \$1.5 million in fiscal year 1998 to initiate a redesigned Pesticide Applicator Training (PAT) Program. This is a unique collaborative effort between USDA and the Environmental Protection Agency, which is making a parallel request for funding in its budget for the program. The purpose is to educate users of restricted-use pesticides on safe and environmentally sound methods of pesticide application. Environmental concerns over the sale, use, and disposal of pesticides are key elements in teaching plans and educational materials developed by state extension services. This collaborative effort will be especially beneficial in helping the extension specialists reach growers and producers on pesticide safety and regulatory requirements. The PAT program directly promotes the REE Mission Area goal to achieve harmony between agriculture and the environment, and contributes to the goal of a safe, secure, food and fiber system by addressing programs to meet the mandates of the 1996 Food Quality Protection Act.

NATIONAL RESEARCH INITIATIVE

An increase of \$35.8 million is requested for the National Research Initiative (NRI), USDA's major merit-reviewed competitive research grants program. "Merit review" takes into account both quality of science and relevance of the proposed research to key problems of enduring importance to agriculture, food, and the environment. The competitive mechanism of funding assures that limited financial resources are used to support only the highest quality research.

These funds provide for fundamental and mission-linked research relevant to agriculture, food, and the environment. Fundamental research tests scientific hypotheses and provides basic knowledge that supports applied research and from which major conceptual breakthroughs are expected to occur. Mission-linked research aims at solving identified high-priority problems and may be either basic or applied in nature. The research supported by the NRI Program also may involve a multidisciplinary approach, or the integration of researchers from two or more disciplines encompassing the biological, physical, chemical, or social sciences.

Research supported under the NRI program ensures our nation's farmers will retain their technological edge. Of particular concern is the need to expand the science base for the Hazard Analysis and Critical Control Point (HACCP) approach to reducing food-borne illness due to microbial pathogens. The health of the environment is also a major concern. Many production practices, such as the excessive use of pesticides, fertilizers and tillage, continue to be a major cause of environmental degradation. In addition, more research is needed on plant genetics leading to improved crops that resist pests and diseases and environmental stress and possess other de-

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sirable traits. Therefore, the increase we propose for the NRI program will expand research in three key areas: food safety, environmental quality, and the genetic enhancement of plants. The NRI Program directly promotes all of the five REE Mission Area goals by ensuring the highest quality of research is directed at increasing the knowledge base needed to effectively address national issues, problems, and concerns related to agriculture, food, and the environment.

RESEARCH, EDUCATION, AND ECONOMICS INFORMATION SYSTEM

We are requesting an increase of \$600,000 for the Research, Education, and Economics Information System (REEIS). The REE Mission agencies which, in addition to CSREES, include the Agricultural Research Service, Economic Research Service, and National Agricultural Statistics Service, currently lack a comprehensive, integrated, user-friendly electronic program information system. The need for complementary and integrated databases among the four agencies was significantly increased as a result of the USDA reorganization several years ago. GPRA further emphasizes the increased accountability and financial management functions which can be addressed by REEIS.

In recent years, the need for this type of system has become more urgent for several reasons. One, a rapid and comprehensive information system is needed to serve as a national reference source for development of new research and education projects on such diverse issues as increasing productivity in agriculture and processing, improving the safety and quality of food, and enhancing the sustainability of the environment and rural communities. Two, in the quest to get the maximum value from research dollars, Federal/State policy makers and administrators are requiring empirical analyses to account for historical, current, and future use of public funds and to provide a basis for redirecting funds to higher priority problems. Three, the GPRA has imposed reporting demands which current, decentralized information systems are not prepared to adequately satisfy. The REEIS will promote the five REE goals by providing current, accurate, and comprehensive information to facilitate evaluation analyses and policy decisions relating to the research, education, and economics programs within the Mission Area.

Section 804 of the 1996 Farm Bill authorized the development of this type of information system, and a modest amount of funding was made available in the fiscal year 1997 appropriation for start-up costs associated with this effort. Approximately \$400,000 is being used for planning the design and development of the REE Information System. CSREES has arranged for two leaders from academia to oversee programmatic content design and technical design of the system. A National Steering Committee has been established to provide advice and guidance throughout the development and implementation phases and a private sector firm specializing in public sector information systems will be engaged to design, develop, test, and install system software and hardware. The proposed increase of \$600,000 for the REE Information System in fiscal year 1998 will allow for the implementation, operation and maintenance of a prototype system.

CHILDREN, YOUTH, AND FAMILIES AT RISK

An increase of almost \$2.15 million is requested for the Children, Youth, and Families at Risk (CYFAR) program, which is funded under Smith-Lever 3(d) and focuses on America's children, youth and families. Of the total increase, \$446,000 will be used to bolster ongoing programs in this critical area. For example, each State has identified youth at risk as a priority, and funding from this program supports community collaborations, school-age child care programs, and strengthened science and technology programs. Of the proposed increase, \$1.7 million will be targeted to the 1890 Institutions to provide opportunities to build statewide extension capacity for supporting community-based programs for at risk youth and families consistent with the 1996 Farm Bill. Specific emphasis will be placed on electronic connectivity to provide computers, software, Internet connections, and technology training for extension staff and participants. This targeting of funds is significant because eligibility under the Smith-Lever 3(d) programs has previously been limited to the 1862 land-grant institutions. However, the Farm Bill specifies that the 1890 Institutions are eligible to apply for and receive directly new and increased funds made available after September 30, 1995, to carry out 3(d) programs or initiatives, which would include the CYFAR Program. CYFAR directly promotes the REE Mission Area goal of enhanced economic opportunity and quality of life for Americans.

SUSTAINED FUNDING SUPPORT

The State-Federal partnership in food and agricultural research, education, and extension has benefited both American consumers and the agricultural industry and

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merits continued strong support. The Hatch, McIntire-Stennis Cooperative Forestry, Smith-Lever, and Animal Health and Disease Research formula-based programs are proposed for funding at the 1997 appropriation levels. The formula funds have an impact far greater than the actual amount of funds provided. Each Federal dollar provided leverages 4 to 5 additional dollars from state, local, and private sources, maximizing the Federal investment in agricultural research, education, and extension. Also, these funds constitute a powerful force in bringing about inter-state cooperation and Federal-State collaboration in the planning and conduct of these activities. Sustaining formula funding strengthens the Federal investment in the research and extension infrastructure to respond to national priorities and critical needs.

The Department continues its focus on helping limited resource farmers and other disadvantaged populations. Funding is maintained at the 1997 appropriation levels for extension formula programming at the 1890 Institutions, the Evans-Allen research formula program, the 1890 Capacity Building Grants Program, and the 1890 Facilities Program.

The fiscal year 1998 Budget Request proposes continued support for most of those Special Grants that concentrate on problems of national and broad regional interest beyond the scope and resources of the formula-based programs. Funding is maintained at the 1997 appropriation level for global change, minor use animal drugs, national biological impact assessment program, rural development centers, water quality, and pesticide impact assessment. Other grant programs, such as Regional Aquaculture Centers and Sustainable Agriculture Research and Education, are also funded at the 1997 level.

Funding is also maintained at the 1997 level for several of the Smith-Lever 3(d) programs, such as Rural Development, the Expanded Food and Nutrition Education Program, Indian Reservation Agents, and Sustainable Agriculture.

HIGHER EDUCATION PROGRAMS

Fiscal year 1998 funding for most of our Higher Education Programs is proposed to be sustained at the 1997 levels. These programs include the National Needs Graduate Fellowships Program, Higher Education Multicultural Scholars Program, Tribal Colleges Education Equity Grants Program, Tribal Colleges Endowment Fund, and the Hispanic-Serving Institutions Education Grants Program. We have requested a modest increase of \$350,000 for our Institution Challenge Grants Program to return the program to its 1996 level and enable us to encourage more colleges and universities to improve the quality of their curriculum in a broader range of areas and attract a wider range of students to the food and agricultural sciences.

PROPOSED ELIMINATIONS

As part of the Administration's efforts to balance the budget, the CSREES Budget Request proposes eliminating \$42.2 million in funding for earmarked Special Research Grants which target specific, local concerns; \$500,000 for Critical Agricultural Materials; \$475,000 for Rangeland Research; \$4.5 million for Farm Safety and Water Quality under Smith-Lever 3(d); \$3.2 million under the Renewable Resources Extension Act; \$1.167 million for Agricultural Telecommunications; \$2.6 million for Rural Health and Safety Education; and \$15.4 million for earmarked special projects under the Federal Administration line items for research and extension. Generally, these programs are state specific and/or do not address current regional or national priorities. Hatch and Smith-Lever (b) and (c) formula funds are available at the discretion of the states to support activities meeting largely state or local needs. Also, in keeping with the Administration's policy of awarding research and construction grants through a competitive, merit-review process, \$61.6 million for the current Research and Education Buildings and Facilities program earmarked for specific institutions is proposed for elimination in fiscal year 1998.

PROGRAM ACCOMPLISHMENTS

Although there are numerous examples of CSREES-funded success stories, below are a few examples representative of outstanding research, education, and extension activities where our programs have made a difference:

—CSREES funding has contributed to the peach Integrated Pest Management (IPM) program at Rutgers University to enable participating peach growers in the state of New Jersey to reduce their use of pesticides by 75 percent. In addition, chemical pesticide use was totally eliminated for some pests. In its annual report on the IPM project supported by CSREES, Rutgers University projected that, if IPM practices followed by the growers participating in the Rutgers pro-

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- gram were adopted by all peach growers in the state, pesticide expenditures would be reduced there by nearly \$1 million annually.
- A disease affecting the catfish industry is Winter Saprolegniosis. About 10 percent of catfish die each year from this disease which results in significant economic losses annually for the catfish industry. With funding from the NRI program, scientists at the University of Mississippi, while studying disease mechanisms and immunity, discovered that Winter Saprolegniosis can be prevented by adding formalin or diquat to the water at concentrations currently approved by the Food and Drug Administration for use in catfish ponds for other purposes.
 - NRI-supported researchers at Oregon State University have invented a unique method for preventing food spoilage and food-borne illness caused by microorganisms. They were recently issued a patent and are hoping to commercialize the result of their efforts, which involve spreading food surfaces with a protein called nisin that kills any bacteria that comes in contact with the food surfaces. The nisin molecules are so firmly attached to the food surfaces that they resist removal even after washing. It is anticipated that nisin-derived solutions will work on wood, aluminum, stainless steel, acrylics and possibly other surfaces, which may increase the potential use of this microorganism “deflector” beyond reducing food-borne illnesses. For example, the use of nisin may be beneficial in the medical world to protect patients against infections during some procedures, such as organ implantation.
 - One of the most debilitating diseases of pigs in recent years has been Porcine Reproductive and Respiratory Syndrome (PRRS). At one point, it affected almost every herd in every state that raised pigs and resulted in such significant economic losses that a typical 600-sow farm could lose \$150,000–\$180,000 per outbreak of PRRS. With support from the NRI Program, researchers at South Dakota State University, in collaboration with private industry and other university researchers, used both conventional and “high tech” laboratory techniques to develop a vaccine that is successfully used to combat the PRRS virus.
 - Georgia extension specialists are helping farmers increase productivity and profitability while enhancing the environment. Farmers have spread more than 42 million gallons of effluent from lagoons that store dairy cattle wastes on crops as fertilizer without surface or ground water problems. This has contributed to a 55 percent decrease in undesirable phosphorus in nearby lakes. Land-grant universities in most states are working on similar projects with livestock wastes.
 - Best known for their learn-by-doing philosophy of youth development, state 4–H programs have successfully adapted their curricula into school enrichment programs. A Tennessee program, 4–H Building Esteem through Science and Technology, improved the science scores of participants by 29 percent on the state’s competency test.
 - In Arizona, extension specialists developed brochures for use by farmers to develop pick-your-own and on-farm produce markets. During a single season (July to October), one Arizona county reported that the brochure and other promotional efforts brought more than 80,000 out-of-county visitors to local farms where they spent \$1.1 million on fresh produce. This influx of visitors increased the income of farmers and also increased tax revenues which allowed county officials to improve public facilities for their constituents.
 - Funding provided by CSREES to the 29 1994 Land-Grant Institutions under the Tribal Colleges Education Equity Grant Program has been used to establish a Center for Integrated Rural Development studies at the Navajo Community College in Arizona, the mission of which is to design and deliver classroom, research and extension programs in fields of community development, economic development, and natural resources management. In addition, Little Hoop Community College in North Dakota is developing curricula for a program in food science to include food preparation, nutrition, and management.
 - Funding from the CSREES Capacity Building Grants Program, has enabled Alcorn State University in Mississippi to develop new four-year degree programs in international agribusiness and to develop an urban forestry program at Southern University in Louisiana. The Nation’s first bachelor’s degree program in regulatory science has been developed at the University of Arkansas at Pine Bluff.

The successes of the agriculture and forestry research, higher education, and extension systems, which were created with the initiation of the land-grant system in 1862, have enabled U.S. agriculture to maintain its world-class competitive edge. This tripartite relationship has resulted in significant improvements in agricultural productivity, created new, improved, and value-added products from agricultural

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and forestry materials, found ways to protect our environment, improved human nutrition and health, and increased our capacity to respond to changes. These improvements have had a profound affect on our standard of living and will impact the lives of future generations world-wide. The degree to which our standard of living has been affected by these developments is reflected in the amount we spend on food in this country compared to other countries. In the U.S., we spend only 11 percent of disposable income on food compared to 15–20 percent in other affluent countries in Europe and in Japan, 35–40 percent in developing countries such as Mexico and Thailand, and more than 50 percent in the lowest income countries such as India and other southeast Asia countries.

The fiscal year 1998 President's Budget Request for CSREES, which reflects the five goals of the REE Mission Area of USDA and issues of great importance to Agriculture, will optimize the contributions of university-based programs to sustain and enhance the agricultural systems of this Nation and worldwide.

PREPARED STATEMENT OF SUSAN E. OFFUTT

Mr. Chairman and members of the Committee, I am pleased to have the opportunity to present the proposed fiscal year 1998 budget for the Economic Research Service.

MISSION

The Economic Research Service provides economic and other social science analysis on efficiency, efficacy, and equity issues related to agriculture, food, the environment, and rural development to improve public and private decision making.

BUDGET

Fiscal year 1997. ERS's appropriation for fiscal year 1997 of \$53.1 million was the same as the fiscal year 1996 appropriation. In response to this static budget level, ERS continued implementation of its streamlining strategy and plans to maintain staff at its current level of 591 full-time equivalents. ERS will continue to make full use of early-out and buy-out authorities. Since October 1993, the ERS staff has been reduced by 204 full-time equivalents. In the future, ERS must continue to constrain staff levels to cope with cumulative budget cuts of \$5.8 million since fiscal year 1993 and to maintain its non-salary program of agricultural data purchases and cooperative university research necessary to support its analytical program.

Fiscal year 1998. The agency's request for fiscal year 1998 is \$54.3 million, an increase of \$1.2 million over fiscal year 1997. The increase consists of three parts: a \$0.8 million net increase for pay raises; \$0.3 million to increase knowledge about the costs and benefits of resource-conserving production practices, and \$0.1 million to provide statistical expertise for GPRA measurement in a governmentwide effort to develop reliable performance information.

In 1993 the Administration announced a goal of bringing 75 percent of the Nation's cropland under integrated pest management (IPM) within 7 years. In addition, the 1996 Federal Agriculture Improvement and Reform Act introduced new conservation and environmental programs aimed at encouraging the adoption of farming practices that conserve soil and reduce nutrient and pesticide run-off. To determine how best to achieve the Department's IPM goal and to implement the most cost-effective conservation programs, economic analysis is needed concerning the factors that affect the adoption of resource-saving technologies, the farm-level cost of these practices, the effect of these practices on output, prices, and the farm input market, and the environmental consequences of practice adoption.

The ERS request to increase knowledge about the costs and benefits of resource conserving production practices would be used, in part, to improve ongoing USDA data collection efforts on a wide range of farming practices, including livestock waste management, crop nutrient and pesticide management, and irrigation management. The data component of the request (\$100,000), would be directed toward: (1) expanding the number of commodities surveyed in the current program to include specialty crops and livestock; or (2) assuring that appropriate economic data are collected along with agronomic information; or (3) linking practice adoption and economic data to natural resource characteristics. The choice among these emphases will depend on an assessment of the adequacy of existing data collection as well as the requirements of the Department's initiative. Using an expanded database, the proposed analysis component of the request (\$181,000) would be used to examine the practices farmers adopt, the cost of adoption, the effect of these practices on the performance of the farm sector, and the effectiveness of practice adoption in meeting

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conservation and environmental goals. Related analysis would focus on variation in adoption rates and costs of adoption across farm size and type of farming operation.

A key component of the Government Performance and Results Act (GPRA) is the mandate to assess performance relative to annually established output and outcome goals. As the GPRA deadlines quickly approach, agencies across the Federal Government are working to develop performance measures and indicators. In this process, agencies are finding that developing meaningful and useful measures and indicators can be very difficult, and developing measures that can be compared across agencies is even more difficult. This initiative is designed to provide statistical support to Federal agencies across the Government to address these challenges. Under the initiative, eight Federal Statistical agencies will participate in a three-part effort to: develop or refine sampling schemes to support valid performance measurement; develop standardized questions and satisfaction scales for common element of Federal services; and add 10 Federal agencies that provide public services to the national American Customer Satisfaction Index. This initiative would provide funds totaling \$125,000 for the Economic Research Service to cooperate with other Government agencies in a \$1.6 million effort to improve statistical expertise for GPRA measurement. ERS would receive \$100,000 to share primary responsibility with the Bureau of Transportation Statistics and the Energy Information Agency in clarifying and providing guidance on performance measurement issues related to GPRA performance measurement. ERS would also use an additional \$25,000 to provide guidance on development of questions for standard survey instruments. ERS' special expertise would be applied in providing perspective and advice on bridging customer satisfaction measurement with measuring success in meeting basic goals for the program.

CUSTOMERS, PARTNERS, AND STAKEHOLDERS

The ultimate beneficiaries of ERS's program are the American people whose well-being is improved by informed public and private decisionmaking leading to more effective resource allocation. ERS shapes its program and products principally to serve key decision makers who routinely make or influence public policy and program decisions. This clientele includes White House and USDA policy officials and program administrators/managers, the U.S. Congress, other Federal agencies and State and local government officials, and domestic and international environmental, consumer, and other public groups, including farm and industry groups interested in public policy issues.

ERS carries out its economic analysis and research in five divisions and an Office of Energy and New Uses. ERS depends heavily on working relationships with other organizations and individuals to accomplish its mission. Key partners include: the National Agricultural Statistics Service (NASS) for primary data collection; universities for research collaboration; the media as disseminators of ERS analyses; and other government agencies and departments for data information and services.

ERS shares five general goals with its fellow agencies in the Research, Education, and Economics mission area: a highly competitive agricultural production system, a safe and secure food supply, a healthy and well nourished population, harmony between agriculture and the environment, and enhanced economic opportunity and quality of life for all Americans. These goals are fully consistent with the U.S. Department of Agriculture mission.

A HIGHLY COMPETITIVE AGRICULTURAL PRODUCTION SYSTEM IN THE GLOBAL ECONOMY

ERS helps the U.S. food and agriculture sector effectively adapt to changing market structure and post-GATT and post-NAFTA trade conditions by providing analyses on the linkage between domestic and global food and commodity markets and the implications of alternative domestic policies and programs on competitiveness. ERS economists analyze factors that drive change in the structure and performance of domestic and global food and agriculture markets; provide economic assessments of competitiveness and efficiency in the food industry; analyze how global environmental change, international environmental treaties and agreements, and agriculture-related trade restrictions affect U.S. agricultural production, exports and imports; and provide economic analyses that help identify competitive and environmentally sound new crops and uses. Looking ahead, ERS will consider how the potential for increased commodity price and farm income variability affects market performance and interacts with Federal policies and programs. These analyses will include short- and long-term projections of U.S. and world agricultural production, consumption, and trade. In addition, ERS will continue preparation for the 1999 World Trade Organization mini-round (expected to focus on agriculture) by analyzing the economic effects of Uruguay Round policy disciplines; assessing the economic effects of state trading and tariff-rate quota allocations; and assessing regional trade

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initiatives. In this latter category, ERS experts will take a more in-depth look at China's evolving role in world agricultural markets. ERS will conduct research on the changing structure (for example, vertical integration, concentration, and contracting) of the food marketing chain and will also analyze the effectiveness and use of alternative marketing strategies and risk management tools in mitigating farm income risk, including tools available from both private and public sector providers.

ERS has initiated work on case studies to support priority-setting for research on ways to use agricultural products, crop residues, and co-products from agricultural processing plants as potential feedstocks in the production of new products with enhanced value. These studies will provide estimates of market potential, job opportunities, and the income effects of new products and involve collaborative efforts between ERS economists and Agricultural Research Service scientists, as well as analysts from other Government agencies and the private sector. More generally, ERS analyses can help guide and evaluate resource allocation and management of public sector agricultural research, a key to maintaining increases in productivity that underlie a strong competitive position for U.S. farmers. ERS economists track and endeavor to understand the determinants of public and private spending on agricultural R&D; evaluate the returns from those expenditures; and consider the most effective roles for public and private sector research entities.

A SAFE AND SECURE FOOD PRODUCTION SYSTEM

ERS focuses on improving the efficiency and effectiveness of public policies and programs designed to protect consumers from unsafe food by analyzing benefits of safer food and the costs of food safety policies; efficient and cost-effective approaches to promote food safety; and how agricultural production and processing practices affect food safety, resource quality, and farm workers' safety. Plans are to focus on policy alternatives for reducing the risks of food borne illness. ERS will conduct empirical research to quantify the value placed by consumers on reduction of health risks in food and drinking water supplies. In collaboration with USDA's Food Safety and Inspection Service, the Food and Drug Administration, and the Centers for Disease Control, an interdisciplinary effort is underway to evaluate the benefits and costs of using Hazard Analysis and Critical Control Point (HACCP) approaches to improve food safety, with a special emphasis on reducing health risks from *Salmonella enteritidis* in eggs and egg products. Research continues to refine estimates of the human medical costs and farm productivity losses associated with microbial pathogens in meat and poultry.

Understanding how food prices are determined is increasingly important in responding to domestic and international market events and opportunities that promote the security of the U.S. food supply. As the farm share of the food dollar declines, accurate retail price forecasts depend more heavily on understanding the marketing system beyond the farmgate. ERS is undertaking a systematic examination of the factors that help set retail prices, including an assessment of the role of the transportation, processing, manufacturing, wholesaling and retailing sectors, the impact of imports and exports, and linkages to the total economy.

A HEALTHY AND WELL-NOURISHED POPULATION

ERS helps identify efficient and effective public policies that promote consumers' access to a wide variety of high-quality foods at affordable prices. ERS economists analyze factors affecting dietary changes; assess impacts of nutrition education and the implications for the individual, society and agriculture; and provide economic evaluations of food nutrition and assistance programs. The Agency plans to study the implications for producers and consumers of movement towards adoption of the dietary guidelines; the trends and determinants of American's eating habits; evolution of food product trade; and the determinants of food prices. Analysis of nutrition education efforts will consider what kinds of information motivate changes in consumer behavior, the food cost of healthy diets, the influence of food assistance programs on nutrition, and the implications of healthy diets for the structure of the food system. And, because trade in high valued agricultural products, including processed food, now exceeds the value of bulk commodity flows, ERS will spend more time to break down the components of these trade flows, understand relationships to international investment and strategic behavior of U.S. food firms; and investigate the implications for U.S. consumers of a globalized food marketplace.

HARMONY IN AGRICULTURE AND THE ENVIRONMENT

In this area, ERS analysis helps support development of Federal farm, natural resource, and rural policies and programs that promote long-term sustainability goals, improved agricultural competitiveness, and economic growth. This effort requires

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analyses on the profitability and environmental effects of alternative production management systems and on the cost effectiveness and equity, of public sector conservation policies and programs. ERS analysts focus on evaluating the benefits and costs of agricultural and environmental policies and programs in order to assess the relationship between improvements in environmental quality and increases in agricultural competitiveness. In this vein, ERS provides economic analyses on the linkages between biodiversity and sustainability issues and agricultural performance, competitiveness, and structure.

In the coming year, plans of work emphasize energy-related resource issues, sustainability, water quality and conservation programs, integrated pest management, and chemical use and risk reduction. In the energy and environment area, the ERS Office of Energy and New Uses provides departmental leadership, oversight, coordination, and evaluation for energy and energy-related policies and programs affecting agriculture and rural America. Its research program will focus on energy markets and, in particular, fuel markets that affect agriculture. ERS staff will be working jointly with analysts from the Department of Energy and the Environmental Protection Agency in developing a risk assessment and cost-benefit analysis of the use fuel oxygenates, including fuel ethanol. ERS will examine the potential use of vegetable oils, animal fats, and recycled grease as an alternative fuel (biodiesel) for diesel engines and consider the potential effects on farm prices, income, and food expenditures. This effort includes work with DOE studying the life cycle of biodiesel fuels to provide information on environmental impacts and total energy use. In an attempt to refine understanding of the components of a sustainable agricultural production system, ERS will build on the outcome of a 1996 agency-sponsored workshop on sustainable agriculture. The Agency's work seeks to identify whether and what kind of economic trade-offs might be associated with a sustainable path of development and to support decisionmaking on public sector actions that would promote sustainability and profitability of U.S. agriculture. In relation to water quality and conservation programs, the goal is to evaluate and synthesize analyses that can inform effective management of public sector environmental quality initiatives. The output will include three key reports: a synthesis assessing the successes and failures of the past 20 years of USDA conservation programs; a comprehensive economic assessment of Federal water quality programs affecting farming; and a report on the growing use of partial interests in use rights (such as easements) as an alternative public/private conservation tool.

ERS will continue to play its long-standing role in helping understand chemical use in agriculture and identifying opportunities to reduce consequent human and environmental health risks. The ERS research program on the economics of IPM will publish the proceedings of the Third National Integrated Pest Management Symposium Workshop—"Designing Integrated Pest Management Programs: Putting Customers First and Learning What Works." The proceedings of last winter's conference will synthesize current understanding of IPM adoption, the barriers to IPM adoption, and the costs and benefits of IPM. This information can be used directly by the Department in designing programs to meet the IPM 2000 goal of adopting IPM practices on 75 percent of the Nation's cropland by the year 2000. The product of the Agency's work on chemical use and risk reduction will be a comprehensive report on chemical use in agriculture. The report will document patterns of chemical use by crop and region, the economics driving changes in chemical formulation of pesticides and nutrients, the economics of pest and nutrient management strategies, and the costs and benefits of alternative policies designed to reduce the risk associated with chemical use in agriculture. ERS will also release an updated edition of "Agricultural Resources and Environmental Indicators," a comprehensive handbook containing data and analysis on the trends and issues pertinent to agricultural land and water use, the application of manufactured inputs and technology, farm productivity, and public policies affecting resource use.

ENHANCED ECONOMIC OPPORTUNITY AND QUALITY OF LIFE FOR AMERICANS

The ERS contribution to improving opportunity and quality of life in the U.S. is based on analysis that identifies how investment, employment opportunities and job training, and demographics affect rural America's capacity to prosper in the global marketplace. ERS economists analyze rural financial markets and how the availability of credit, particularly Federal credit, spending, taxes, and regulations influence rural economic development. An assessment of the availability of credit for agriculture, industry, and households in rural areas, recently completed under a 1996 Act mandate, will be extended to assess the competitiveness of rural credit markets. ERS also analyzes the changing size and characteristics of the rural and farm populations and the implications of these changes in human capital, including skill de-

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velopment, on the performance of rural economies. In addition, ERS studies the economic structure and performance of non-farm economic activities in rural areas. One of the areas identified for special attention this coming year concerns the fairly widespread rebound in population growth in non-metropolitan counties. The relevant analysis will involve monitoring rural earnings and labor market trends with emphasis on regional and other disaggregations in order to provide insight into the determinants of variation in trends among non-metro counties. Such work should yield a better understanding of the factors that promote rural vitality and the opportunities for effective public sector intervention.

Because the effects of changes in welfare programs may vary between rural and urban residents due to differences in labor markets and other aspects of a regional economy's structure, ERS social scientists will track implementation of recent program changes to understand any differential impacts. In particular, ERS analysis can help anticipate changes in participation across assistance programs, including those for which USDA has primary responsibility, in rural housing and in food. Another opportunity for understanding whether rural America faces unique circumstances will come with analysis of a recently-completed survey of the rural manufacturing sector.

ERS continues to monitor the financial situation of the farm sector, establishing farm business organization and performance benchmarks. This task includes study of the financial position of farmers who employ technological advances and innovative risk management strategies in their businesses, compared with the financial position of farmers who use more traditional approaches. Previous work on the use of production and marketing contracts by farmers will be extended to identify contractors by class to better define the role of non-farm businesses in the industrialization of farms. Analyses of financial performance will also measure the comparability of returns between farm and non-farm small businesses and assess the financial viability of commercial and non-commercial size farm operations. Complementary to its work on black and other minority farmers, ERS will develop a profile of female farm operators in 1997 to give support to an important but largely unreported segment of agriculture. This effort will also contribute to the Administration's initiatives supporting the goals of the U.N. Beijing Women's Conference.

CLOSING REMARKS

I appreciate the support that his Committee has given ERS in the past and look forward to continue working with you and your staff to ensure that ERS makes the most effective and appropriate use of the public resources. Thank you.

PREPARED STATEMENT OF DONALD M. BAY

Mr. Chairman and members of the Committee, I appreciate the opportunity to submit this statement for this Committee to cover the fiscal year 1998 budget request for the National Agricultural Statistics Service (NASS). This Service was created in 1862 to provide useful, timely, and unbiased statistics and other information about the Nation's food and agricultural industry.

The structure of farming and of the agricultural industry has changed dramatically since the initial crop reports were issued over 130 years ago. However, the need for accurate, timely, and impartial statistical information on the Nation's agriculture has become even more important as the Nation has moved from subsistence agriculture to a highly industrialized agricultural industry producing food and fiber for the world market. The crop, livestock, and other estimates developed and published throughout the year, in cooperation with State Departments of Agriculture, contribute significantly to the information available on American agriculture. The State-Federal cooperative relationship, which began nearly 80 years ago, eliminates duplication and provides State input, while maintaining national consistency in surveys conducted throughout the United States.

The agricultural statistics program provides information critical to the entire food and fiber system which totals over 14 percent of the gross domestic product and employs more than one out of every six employees in the United States. The basic supply information provided by NASS is of interest to producers, handlers, processors, wholesalers and retailers of agricultural commodities.

The Nation's food industry affects the U.S. balance of trade, the nutritional well-being of our citizens and people around the world, and the quality of our environment. NASS estimates play an important role in supporting this industry. Today, NASS spends about $\frac{1}{25}$ of a cent per dollar of sales of raw agricultural commodities to provide the basic impartial and unbiased statistics that underpin the United States and world commodity markets. NASS works to ensure the quality and integ-

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riety of its surveys in order to provide timely and accurate agricultural statistics. These statistics are essential because they help provide a level playing field for all engaged in the food and fiber system and reduce market risk.

The collection of public statistics on agriculture preceded Government commodity programs and was designed to assure competitiveness in commodity markets. Therefore, a reduction in spending on Government commodity programs is not expected to reduce the need for agricultural statistics, and may actually lead to a greater demand for accurate information as producers take their production signals entirely from the market. Empirical evidence suggests that increased information improves the efficiency of competitive markets. A lack of information or inaccurate information can cause producers to underproduce or overproduce, misuse storage, or miss foreign or domestic market opportunities. As producers' abilities to process and analyze data increase, so does the demand for accurate and timely agricultural information. In addition, the increase in agricultural product differentiation and market complexity has made many commodities much more heterogeneous. This, in turn, has led to an increased need for more detailed information. For example, a vast amount of U.S. barley is sold on the basis of variety. Therefore, having data on just total barley production is no longer sufficient to support the domestic and growing international market for the sale of specific varieties of barley.

NASS statistical reports are not only used by the food and fiber industry to assess the supply and demand of agricultural commodities, but they are also used by farm organizations and government officials in analysis of agricultural policy, foreign trade, conservation programs, agricultural research programs, environmental programs, rural development, and many other activities. NASS data are examined very closely by farmers, agribusinesses, food industry analysts, economists, investors, as well as Federal policy makers and analysts, as decisions are made that affect the Nation's economy.

All reports issued by NASS's Agricultural Statistics Board are made available to the public at previously announced release times to ensure that everyone is given equal access to the information. NASS has been a leader among Federal agencies in providing electronic access to information. All of NASS's national statistical reports and data products, including graphics, are available on the Internet, as well as in the popular book, "1995-96 Agricultural Statistics."

In fiscal year 1997, NASS received funding for the first time to conduct the 1997 Census of Agriculture. By consolidating the existing NASS survey activities with the Census of Agriculture, the two agricultural statistics programs will be merged and the resources and experience pooled from the two agencies. The transfer of the responsibility for the Census of Agriculture to USDA streamlines Federal agricultural data collection activities, improving efficiency and the quality of data provided. The Census of Agriculture is conducted every 5 years and the next one will be taken in 1998 for the 1997 calendar year.

Statistical research is conducted to improve methods and techniques used in collecting and processing agricultural data. This research is directed toward providing higher quality survey data with less burden to respondents, producing more accurate and timely estimates to data users, and increasing the efficiency of the entire survey process. For example, NASS has been a leader in the research and development of satellite imagery to improve agricultural statistics. The NASS statistical research program strives to improve methods and techniques for obtaining agricultural statistics with an acceptable level of accuracy. The growing diversity and specialization of the Nation's farm operations have greatly complicated procedures for producing accurate agricultural statistics. Development of sophisticated sampling and survey methodology, along with intensive use of telephone and face-to-face contacts and computer technology enable NASS to keep pace with an increasingly complex agricultural industry.

NASS performs a number of statistical services for other Federal, State, and producer organizations on a cost-reimbursable basis. In addition, NASS has an expanding international program to provide technical assistance to a number of countries.

MAJOR ACTIVITIES OF THE NATIONAL AGRICULTURAL STATISTICS SERVICE (NASS)

The primary activity of NASS is to conduct surveys which include the collection, summarization, analysis, and publication of reliable agricultural forecasts and estimates. Farmers, ranchers, and agribusinesses voluntarily respond to a series of nationwide surveys about their crops, livestock, prices, and other agricultural activities each year. Periodic surveys are conducted during the growing season to measure the impact weather has on crop production. Frequent surveys are also needed on food products that are perishable. Many crop surveys are supplemented by actual field observations in which various plant counts and measurements are made. Adminis-

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trative data from other State and USDA agencies, as well as data on imports and exports, are thoroughly analyzed and utilized as appropriate. NASS prepares estimates for over 120 crops and 45 livestock items which are published annually in almost 400 separate reports.

Agricultural reports issued by NASS include: number of farms and land in farms; acreage, yield, and production of grains, hay, oilseeds, cotton, tobacco, major fruits and vegetables, floriculture, and selected specialty crops; stocks of grains; inventories and production of hogs, cattle, sheep and wool, goats, catfish, trout, poultry, eggs, and dairy products; prices received by farmers for products; prices paid by farmers for inputs and services; cold storage supplies; agricultural labor and wage rates; agricultural chemical usage; cultural farming practices; and other data related to the agricultural economy.

The Census of Agriculture provides national, State, and county data for the U.S. on the agricultural economy every five years, including: number of farms, land use, production expenses, farm product values, value of land and buildings, farm size and characteristics of farm operators, market value of agricultural production sold, acreage of major crops, inventory of livestock and poultry, and farm irrigation practices. The Census of Agriculture is the only source for this information on a local level which is extremely important to the agricultural community. Detailed information at the county level help agricultural organizations, suppliers, handlers, processors, and wholesalers and retailers better plan their operations. Important demographic information supplied by the Census of Agriculture also provides a very valuable data base for developing public policy for rural areas.

The NASS agricultural statistics program is conducted through 45 field offices servicing all 50 States. Nearly two-thirds of the Agency's staff and resources are located in the field. All State offices operate under cooperative funding and 25 are collocated with State Departments of Agriculture or land-grant universities. This joint State-Federal program helps meet State and national data needs while minimizing overall costs, eliminating duplication of effort, and reducing the reporting burden on farm and ranch operators. NASS's State Statistical Offices issue approximately 9,000 reports each year.

NASS has developed a broad environmental statistics program under the Department's water quality and food safety programs. Until 1991, there was a complete void in the availability of reliable pesticide usage data. This became evident during the Alar apple situation. In cooperation with other USDA agencies, the Environmental Protection Agency (EPA), and the Food and Drug Administration (FDA), NASS has implemented comprehensive chemical usage surveys that collect data on selected crops in selected States. Beginning in fiscal year 1997, NASS began survey programs to acquire more information on Integrated Pest Management (IPM), additional farm pesticide uses, and post-harvest application of pesticides and other chemicals applied to commodities after leaving the farm. These programs will result in significant new chemical use data, which will be important additions to the existing chemical use data base. These surveys also collect detailed economic and farming practice information for the purpose of determining the use of IPM practices as well as to analyze the profitability of different levels of chemical use.

Our farms and ranches manage half the land mass in the United States, underscoring the value of complete and accurate statistics on chemical use and farming practices to effectively address public concerns about the environmental effects of agricultural production. Annual surveys are used to assess the current level of IPM adoption by growers and in turn support research and educational efforts to assist farmers in adoption of improved pest management practices.

NASS conducts a number of surveys and provides consulting services for many USDA agencies and other Federal, State, and private agencies or organizations on a cost-reimbursable basis. Consulting services include assistance with survey methodology, questionnaire and sample design, information resource management, and statistical analysis. NASS has been very active in assisting USDA agencies in programs that monitor nutrition, food safety, environmental quality, and customer satisfaction. In cooperation with State Departments of Agriculture, land-grant universities, and industry groups, NASS conducted 152 special surveys covering a wide range of issues such as farm injury, nursery and horticulture, turfgrass, soybean cyst nematodes, farm finance, fruits and nuts, popcorn, animal predator loss, and ostriches and other exotics.

NASS provides technical assistance and training to improve agricultural survey programs in other countries in cooperation with other Government agencies on a cost-reimbursable basis. NASS's international programs focus on both developing countries, such as those in Asia, Africa, the Middle East, and Central and South America, as well as emerging democracies in Eastern Europe. Accurate information is essential in these countries for the orderly marketing of farm products. NASS

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works directly with countries undergoing the transition from centrally planned to market economies by assisting them in applying modern statistical methodology, including sample survey techniques. Short-term assignments supported work in Albania, Bulgaria, China, Colombia, Ethiopia, India, Kazakhstan, Morocco, Nicaragua, Poland, Romania, Russia, and the Ukraine.

NASS annually seeks input on improvements and priorities from the public through: regional data user meetings with representatives from agribusinesses and commodity groups, special briefings for agricultural leaders during the release of major reports, and through numerous individual contacts. The Agency has made many adjustments to its agricultural statistics program, published reports, and electronic access capabilities as a result of these activities to better meet the statistical needs of its customers.

FISCAL YEAR 1998 PLANS

The fiscal year 1998 budget request is for \$119,877,000. This is a net increase of \$19,656,000 over fiscal year 1997.

The budget request includes an increase of \$18,500,000 to fund the 1997 Census of Agriculture over the \$17,500,000 that was appropriated for fiscal year 1997, for a total of \$36,000,000. Fiscal year 1998 is the fourth and peak year of the six year funding cycle for the Census of Agriculture. This is the year that the questionnaires are prepared, labeled, mailed, and the data are collected, put into machine readable format, edited, tabulated, and reviewed.

The transfer of the responsibility for the Census of Agriculture to NASS consolidates the activities of the Census of Agriculture with the current agricultural survey program administered by NASS. By merging these two programs, efficiencies will be attained in building a complete list of farm and ranch operators and reducing the reporting burden on agricultural producers. The Census of Agriculture will benefit from the local knowledge base that the NASS field office infrastructure will contribute. In addition, this distributed infrastructure will make it possible to review and summarize the results of the Census of Agriculture in a more timely fashion, and will reduce the reporting burden of agricultural producers who will now be asked to report basic farm data to a single Federal agency.

NASS is realizing a decrease of \$1,000,000 and 3 staff years for list frame development and maintenance, as a result of efficiencies gained in assuming responsibility for the Census of Agriculture. NASS list frame development and maintenance costs will be reduced due to efficiencies gained from NASS conducting the Census of Agriculture. With NASS now responsible for the Census of Agriculture, list development and maintenance costs can be reduced as progress is made towards consolidating the two separate name and address lists of farmers and ranchers.

This fiscal year 1998 budget request also includes an increase of \$640,000 for increased data collection costs, which is to cover higher costs for survey interviewers who are employed under a cooperative agreement with the National Association of State Departments of Agriculture and whose salary increases are not covered by Federal pay cost increases. The data collected by these interviewers form the foundation of the NASS survey and Census of Agriculture program.

The fiscal year 1998 budget request includes an increase of \$540,000 for Government and Performance and Results Act (GPRA) measurement, which is NASS's portion of an initiative to provide statistical support by eight agencies to other Federal agencies across government in the development of meaningful performance measures and indicators.

An increase of \$976,000 is requested to cover pay costs, which consists of \$310,000 for the annualization of the fiscal year 1997 pay raise and \$666,000 for the estimated fiscal year 1998 pay raise. NASS is absorbing almost half of the combined anticipated pay raise in fiscal year 1998 and the annualization of the fiscal year 1997 pay raise.

BIOGRAPHICAL SKETCH

CATHERINE ELLEN O'CONNOR WOTEKI, PH.D. R.D.

In June, 1996, the Secretary of Agriculture appointed Dr. Catherine Woteki as the Acting Under Secretary for Research, Education, and Economics. In this capacity, Dr. Woteki is responsible for the management of four agencies: the Agricultural Research Service, the Cooperative State Research, Education, and Extension Service; the Economic Research Service; and the National Agricultural Statistics Service. She leads the Administration's implementation of the 1996 farm bill's provisions on research and education that include establishing a new 30-member Advisory Board,

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implementing a competitive grants program under the Fund for Rural America, and establishing a Research Facilities Strategic Planning Task Force to review agriculture research facilities and recommend a 10-year plan for modernization, construction, consolidation, and closings.

Dr. Woteki joined the U.S. Department of Agriculture in January, 1996 as the Deputy Under Secretary for Research, Education, and Economics. She led the development of a mission area strategic plan by which the four REE agencies' program and budget planning is being brought into a more disciplined, integrated program. Prior to joining USDA, she was Deputy to the Associate Director for Science in the White House Office of Science and Technology Policy (1994-95), and Director of the Food and Nutrition Board, Institute of Medicine, National Academy of Sciences (1990-94).

Dr. Woteki was born in Fort Leavenworth, Kansas, on October 7, 1947. A biology and chemistry major at Mary Washington College in Fredericksburg, Virginia, she pursued graduate studies in human nutrition at Virginia Polytechnic Institute and State University. For two years, she performed clinical research in the Department of Medicine of the University of Texas Medical School at San Antonio. She was appointed assistant professor in the Department of Nutrition and Food Science at Drexel University in Philadelphia in 1975. In July 1977, she joined the Congressional Office of Technology Assessment as Nutrition Project Director. From 1980 to 1983, she worked for the U.S. Department of Agriculture in two capacities: as leader of the Food and Diet Appraisal Research Group in the Consumer Nutrition Center, and as Acting Associate Administrator of the Human Nutrition Information Service. Dr. Woteki was Deputy Director of the Division of Health Examination Statistics, National Center for Health Statistics, U.S. Department of Health and Human Services from 1983 to 1990.

Dr. Woteki's scholarly interests include nutritional epidemiology, food and nutrition policy and nutrition monitoring. Dr. Woteki is the co-editor of "Eat for Life: The Food and Nutrition Board's Guide to Reducing Your Risk of Chronic Disease," a book selected by the Book of the Month Club. Dr. Woteki has received the Elijah White Award of the National Center for Health Statistics, the Special Recognition Award from the U.S. Public Health Service, and the Staff Achievement Award of the Institute of Medicine. She was selected as the outstanding alumna of the College of Human Resources, Virginia Polytechnic Institute and State University, in 1987. She and her husband, Tom, reside in Washington, DC.

DECREASE IN OVERALL BUDGET REQUEST

Senator COCHRAN. Dr. Woteki, I notice your comments on page 4 of your statement describe in general the decrease of \$49 million overall in the budget request for this mission area under your jurisdiction.

Are all of the cuts that the administration proposes in the CSREES portion of the budget? You mention ARS getting some cuts. There is also a comment on page 5 that says the budget reflects an adjustment of priorities leading to an increase of \$10 million in research and a commensurate decrease in buildings and facilities improvement funds, so the only area of the budget it appears to me that comes in for substantial cuts is the CSREES portion of the budget. Is that correct?

Dr. WOTEKI. The biggest cuts are in buildings and facilities grants within CSREES, which is approximately \$60 million.

We have made some adjustments within ARS of priorities that have permitted us to put some additional funding into high-priority research areas, and that also have led to decisions about closures on four facilities sites that would represent substantial savings to be put back into the research priorities, so those are the major changes that we have made.

Senator COCHRAN. With respect to the supplemental, I appreciate your comments on the House action which would reduce by \$20 million the Fund for Rural America to offset some of the additional spending in the bill.

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Did you notice also, and do you have a reaction to the inclusion in that bill of the Supplemental Nutrition Program for Women, Infants, and Children as eligible for funding through the Fund for Rural America?

Dr. WOTEKI. Yes.

Senator COCHRAN. What is your reaction to that?

Dr. WOTEKI. Well, it is certainly a great expansion beyond what I read as being the intent for the Fund for Rural America to allow or permit funding of the WIC program directly from that fund. I think it dilutes the original intent of it.

Senator COCHRAN. We will be taking that up very soon in our committee and having your comments about that will be helpful to us.

I am going to yield to my colleagues for any questions they might have, and I will resume my questioning of the witnesses later.

Senator Burns.

CHILDREN, YOUTH, AND FAMILIES AT RISK

Senator BURNS. I have just one question, doctor. Tell me about the children and families at risk program. Who can explain that program to me?

Dr. WOTEKI. I am going to ask that Dr. Robinson, who is Administrator of CSREES, provide you with some background about the program.

Senator BURNS. You guys have got so many letters and figures down there I do not know what they all stand for.

I had breakfast at the Pentagon this morning and got lost three times before I got out of there. I think the Agriculture Department is getting about the same.

Dr. ROBINSON. It is that time. Even with the acronym for the name of this agency one can get lost in it. I have been there for a year and still can.

Perhaps I could respond generally to your question about the purpose of the Children, Youth, and Families at Risk Program. That program has been funded for a number of years, and the increase of \$2.1 million proposed for fiscal year 1998 increases it above the 1995 level.

Senator BURNS. What is that level?

Dr. ROBINSON. The 1995 level was \$10 million. It is \$11.7 million, but of that \$1.7 million is targeted for 1890 institutions.

The reason for that is as follows. Up until the 1996 reauthorization of the research, extension, and education title, 1890's were not eligible for funds under this funding line for children, youth, and families at risk, and it was felt that a lot of these institutions deal specifically with those problems at risk in the rural communities.

Senator BURNS. Give me an example.

Dr. ROBINSON. It deals with things like making sure that there are programs through 4-H or through other youth activity programs to support youth, to educate youth, to provide alternatives to youth to the kinds of problems that they are involving themselves in.

It also involves in many cases joint work with the Department of Justice or with the Department of Health and Human Services programs in local communities to try to deal with youth crime,

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youth pregnancies, to try to deal with the whole array of problems that young people are facing now, and it is one of the places where actually there are partnerships that are developing between rural leadership and extension and the Children, Youth, and Families at Risk Program, and programs that are also in local communities, or State programs through Justice or Health and Human Services.

But it is addressed very much to the at-risk elements people face in growing up either in rural areas or small towns.

Senator BURNS. It just sounds like to me we have got quite a lot of redundancy here. I mean, you are trying to do the same thing as Health and Human Services are doing.

Dr. ROBINSON. Actually, we are trying very hard to make sure that we have complementary programs that are reaching beyond the programs that Health and Human Services have and reaching both groups of people and groups of problems that their programs do not reach.

That is one of the reasons to try to form partnerships with Health and Human Services, because a lot of the youth problems in many of the rural areas were not being addressed by existing programs, and that was the reason for instituting this line to begin with, and I do not recall the date that it was put into effect, but it has been in effect for several years.

Senator BURNS. I am pretty familiar with WIC and what it does because I have got county government experience, but it is little programs like this that, say, take \$8 or \$9 million here, or \$8 or \$9 million there, and pretty soon we have eaten up a budget, and basically it is make-work for the people in the Department rather than any good that they are doing for youth or families or anything else because of the redundancy involved because everybody is tripping over everybody else out there trying to show that they have compassion and we do not get anything done.

So there might be some redundancy there. That is the reason I asked you what the program does specifically. I have never run into this.

I remember when I was a county commissioner—of course, a lot of water has gone down the crick, except to Grand Forks. It is not going down the crick too quick there, but I just think there is some redundancy here of one Department with another.

Dr. ROBINSON. Perhaps I can answer a couple of the questions you posed. My colleague just told me that this program has been funded since 1991, and the figure in 1997 is \$9.5 million.

Two other programs that might be of interest to you are after school care and 4-H Club work and some summer fun experiences for children who do not understand farming activities, so it is a rather diverse program, and it is really geared to the needs of the local area where extension is located, not to a national program that says do these five things, but rather, what are the needs that are locally identified by local constituencies that are not being served, Senator, by the other programs, and once those are identified to try to address the small amount of resources nationwide specifically to those locally identified issues.

Senator BURNS. Who administers it at the local level?

Dr. ROBINSON. It is administered through the State extension services and through the local county agents.

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Senator BURNS. OK. That is all the questions I have.

Thank you very much, Mr. Chairman.

Senator COCHRAN. Senator Bumpers.

Senator BUMPERS. Thank you, Mr. Chairman.

Dr. Horn—maybe I should ask you, Secretary Woteki, you state in your statement that ARS is moving ahead with a strategic planning task force mandated by the 1996 farm bill to determine which, if any, ARS facilities should be closed, and yet in your budget you propose to close four facilities. Why would you propose that before your task force study is completed?

STRATEGIC PLANNING TASK FORCE

Dr. WOTEKI. Well, as I indicated in my opening statement, Senator, we have also had to make some very hard decisions based on program priorities.

We have taken as a principle that we are not proposing major new construction either within ARS or facilities to be placed on university campuses, except for those that have been very high priority within ARS, and that those three facilities that are included in our budget request represent very longstanding high-priority construction projects within the ARS.

My sense, though, is that given we are in a very tight budget climate at this point in time, given that we do have to be responsive to shifting priorities and shifting needs from the agricultural sector, and given that we do not have expectations of major new increases in funding in agriculture research, we have to make some very hard programmatic decisions based on the quality of the research that is being done as well as its relevancy to those current needs.

Based on those decisions, and a quality review and program review that was done in the Agricultural Research Service, we came to the conclusion that it was appropriate at this time to recommend closure of two work sites and two laboratories.

Now, this task force that was required in the farm bill last year, and for which the Secretary has just recently announced the membership, is tasked with making a strategic plan with a 10-year time horizon on it.

They have 2 years in which to do their work, and they will have their first meeting, in fact, next month to actually begin their work. But given, again, the very tight budget situation, our sense is that we are going to have to continue to make some decisions based on the merits of the work that is being done in ARS's facilities, and we cannot suspend all of those decisions for 2 years while we wait for the task force to complete its work.

Senator BUMPERS. Mr. Chairman, I ask unanimous consent that before I forget it I be permitted to submit a few written questions on behalf of Senator Dorgan, who is not a member of the subcommittee, but is a member of the full committee.

Senator COCHRAN. Without objection, it is so ordered.

Senator BUMPERS. Dr. Horn, you know, since the memory of man runneth not, we have been in these fights about competitive research grants as opposed to the grants that Senator Cochran and I like. I would just like to reiterate my thinking about that by reviewing some of the past history.

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For example, when you look at the increase in aquaculture farming in this country, double from 300-and-something million pounds a year to over 700 million pounds a year since 1980, and the rice germplasm center in Stuttgart is almost finished—and in that connection I had to fight like a saber-toothed tiger to get the rice germplasm center put in Stuttgart, AR, where about 43 percent of the rice in this country is grown, because it was going to go to Idaho, which did not have one single rice plant, simply because they had another germplasm center out there.

Now, I know that in this day of rapid communications maybe it does not make a lot of difference where it is put, but to put a rice germplasm center in a place in Idaho which does not grow any rice at all, as opposed to putting it in a perfectly legitimate place where 43 percent of the Nation's rice crop is grown made no sense.

And I think about the poultry center of excellence, which will become and is becoming one of the greatest scientific centers on increased production, safety, and everything of poultry—I will not belabor the point, but Dr. Horn was just down at Boonville, AR, at the Dale Bumpers Small Farm Research Center and saw for himself the kind of really magnificent work that research center is doing.

So let me just say, Dr. Horn, I do not know which side of this issue or whether you are on either side or not, but would you comment on that?

APPROPRIATE MECHANISM FOR FUNDING AGRICULTURAL RESEARCH

Dr. HORN. I am not sure I exactly have the issue, but I think if the issue relates to the portfolio of funding mechanisms, I am firmly on the side of a mixture. We do have some requirements for rapid responses to emergencies, and directed research, merit reviewed research programs that I think can be and have been just as good as any other kind.

On the other hand, I do think there is a need to attract the larger science community to do some cutting edge work on fundamental research programs that can feed into agriculture and help us in the long run.

I also think that we have benefited from the opportunity to specifically address questions in specific parts of the country where the work is most appropriate through the use of special grants over the years, and so I think my answer to that question would be, we need a mix of funding mechanisms, and each has proven very, very valuable to us.

Senator BUMPERS. As far as I am concerned that is a good answer. I could not agree with you more. There are perhaps some research projects that necessarily have to go on a competitive basis because there is some really giant research institution that could do it. We all admit they could probably do it better. They are equipped to do it better.

But when you think about Mississippi and Arkansas, and Mississippi is considerably bigger than we are in aquaculture, but when you look at the unbelievable increase in production which has occurred because of research—it has occurred some because of the expansion of farming itself, but a lot of it has occurred—if you look at the per acre yield, you will find it is up about fourfold in the

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last 20 years, all of that by research, and when you consider the fact that we are still tenth in the world in seafood production, and it is still the only thing that even holds out—we are still a net importer of fish and aquaculture products.

It contributes I do not know how many billion, a few billion dollars to the deficit every year, and here Senator Cochran and I are just busting to close that gap, and we think a lot of it can be closed by good research, so I just wanted to get that on the record and say that we will continue to fight for legitimate projects that could go to our respective States. After all, this Nation is supposed to serve everybody, not just a few prestigious institutions.

Dr. Woteki.

REAUTHORIZATION OF THE RESEARCH TITLE OF THE FARM BILL

Dr. WOTEKI. Senator, you have actually touched on some very fundamental issues with respect to the way that agricultural research is funded in this country and how we make our decisions about siting of different facilities.

As you are well aware, the research title was reauthorized last year in the farm bill for only 2 years, and that both the Senate and the House Agriculture Committees will be taking up this year reauthorizing legislation for the research programs within the Department.

Senator Lugar posed to us some very, very interesting questions about what would be the most appropriate mechanisms for funding agricultural research now and for the future. In response to those questions, the Secretary sent a letter back to the Senator which I would be happy to share with you that kind of lays out a number of principles that we believe should be the basis for the discussion on the research title reauthorization. It touches on many of these same issues, and we would be happy to share that letter with you as well.

Senator BUMPERS. I would appreciate that.
[The information follows:]

LETTER FROM DAN GLICKMAN

DEPARTMENT OF AGRICULTURE,
OFFICE OF THE SECRETARY,
Washington, DC, March 12, 1997.

Hon. RICHARD LUGAR,
U.S. Senate, Senate Committee on Agriculture, Nutrition, and Forestry, Russell Senate Office Building, Washington, DC.

DEAR MR. CHAIRMAN: I am writing in response to your letter of January 10, 1997. This letter responds to both your letter to me and Dr. Catherine E. Woteki, Acting Under Secretary, Research, Education and Economics. We appreciate your commitment to the future of the agricultural knowledge system, which is comprised of research, education, and extension programs. We welcome the opportunity to discuss the future of these programs within the Department of Agriculture (USDA) and with our partners, and we look forward to working with you and members of the Senate Agriculture, Nutrition, and Forestry Committee in preparation for reauthorization of these programs in 1997.

Federally funded agricultural research, education, and extension are conducted in pursuit of national goals, such as world food security, better health, wise use of natural resources, and greater economic security for agricultural producers. Attaining these goals is challenging given deregulated domestic and foreign markets and economic projections that world food demand will double in the next 30 years. Innovation in the agricultural sector to meet our national goals depends in part upon Federal investment in research, technology transfer, and the education of future sci-

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entists and producers. Although the Federal contribution is 25 percent of national agricultural research and development (R&D) expenditures, we believe that it plays a critical role.

The questions posed in your letter recognize these challenges and provide a thought-provoking starting point for our discussion about the future. This letter provides the Administration's fundamental principles guiding our thinking as we address these issues critical to success of the agricultural sector in the next century. We look forward to continued dialogue with the Committee and plan to provide a detailed legislative proposal to you later this spring.

1. USDA and the Research, Education and Economics mission area¹ within it invest in creating and strengthening the research and educational capacity essential to meeting national goals for the food and agricultural system.

Scientific knowledge is necessary for helping us achieve our broad national goals of improved health, environment, prosperity, national security, and quality of life. Equally important are educational institutions and government programs, such as Extension, that promote the dissemination of knowledge and technologies. Accelerating the development of technologies is critical to sustaining our nation's long-term economic growth and for increasing agricultural productivity while reducing its environmental impact.

Past investment in the research, education, and extension system is broadly believed to be responsible for providing substantial economic advantages to American producers and consumers and simultaneously contributing to food safety and improved health. While agricultural production employs less than 2 percent of the population, the food and agricultural sectors account for 16 percent of jobs. Agricultural exports are a significant player in decreasing the nation's trade deficit. This contribution depends on our constant attention to new challenges that emerge in the form of new pests and diseases that threaten our production capacity, of new organisms or more virulent strains of organisms that challenge our food safety system, and of new competitors around the globe who vie for the markets upon which the prosperity of farmers, ranchers, rural Americans, and all those who participate in the agricultural sector depends.

The Research, Education, and Economics (REE) mission area is focusing our research, education, and extension efforts toward attaining 5 general goals for the nation's food and agricultural system. They are:

- (1) An agricultural system that is highly competitive in the global economy,
- (2) A safe and secure food and fiber system,
- (3) A healthy, well-nourished population,
- (4) Greater harmony between agriculture and the environment, and
- (5) Enhanced economic opportunity and quality of life for Americans.

These goals were derived from purposes of agricultural research defined by Congress in the 1990 FACT Act and the 1996 Farm Bill as well as from input from numerous listening sessions and consultations with stakeholders, including our REE Advisory Committee.

2. The programs of the REE mission are dedicated to maintaining world leadership and excellence in agricultural science and education.

Scientists working at the leading edge in the food and agricultural sciences are essential to maintain and improve our competitive position for U.S. agriculture. U.S. scientists must continue to make a significant share of scientific advances and to capitalize on new discoveries that are made abroad. By maintaining a tradition of scientific excellence, the nation will be better positioned to educate the scientific and technical work force required by our economy. To sustain U.S. leadership in the world and strengthen participation in collaborative scientific and educational endeavors, we must increase our level of interaction with colleagues in other countries.

World leadership is also maintained by funding the best scientific endeavors and the best people to conduct research, education, and extension activities. As a result, the Administration supports increasing the proportion of the portfolio of Federal agricultural research that is awarded by merit review with peer evaluation. This support is evidenced in the President's budget proposal for the Department of Agriculture, which calls for significant increases in appropriations for the National Research Initiative and other competitively awarded grant programs. The Administration also supports and encourages integrated problem solving, as demonstrated by our design of the Fund for Rural America competitive grant program. The chal-

¹The Research, Education, and Economics mission area is comprised of four agencies: the Agricultural Research Service, the Cooperative State Research, Education, and Extension Service, the Economic Research Service, and the National Agricultural Statistics Service.

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lenges of today and the future are more complex than those we have solved in the past and require multi-functional, multi-disciplinary, multi-institutional approaches to problems. As a result, the research, education, and extension system must build on proven successes and adapt to future challenges. Well educated scientists and citizens are the well spring of new ideas and new solutions to challenging problems. America will need a scientifically literate society to face the challenges of the 21st Century. Higher education programs of diverse institutions as well as nonformal education provided by Extension are critical to achieving this literacy.

We will sustain this excellence only by engaging the talents of our diverse population. A responsive research, education, and extension system is comprised of people with a variety of experiences and perspectives, providing the necessary insight for problem solving. We must improve our educational and extension systems to give children and adults a greater understanding and appreciation of the food and agricultural sciences, thereby better informing their decisions and understanding.

3. *The Federal government has a distinct role to play in partnership with state and local governments and the private sector.*

Federal investment in research, education, and extension is necessary despite significant state and private sector investments. Economically, while state funded research benefits that state's producers and consumers, some portion "spills over" to consumers and producers in other states. If a state considers only the benefits of its research to its own producers and consumers, it would tend to invest less than would be optimal from a national perspective. This is similar to the case of a private firm under investing in research because it cannot capture all the returns, such as research on food safety, diet, health, and the environment, where private or state investments are low but social payoffs are high. In addition, states will tend to favor applied research and technology development at the expense of more basic or pre-technology research, since the former is likely to have more direct state benefit.

A second unique role for the Federal government is that of providing in-house scientific expertise, which is essential for national and international leadership and coordination in agricultural science and education. The effectiveness of the State system depends on regional and interregional coordination and linkages provided through national program leadership in USDA.

Consistent with the Administration's philosophy that state, local, and tribal governments have strong roles in governance, the Administration values an active federal-state-local partnership in setting research, education, and extension priorities, in conducting the work, and in evaluating the results. The Administration supports efforts such as:

- stronger integration with the broader science community (to the benefit of applications and advances in food and agricultural sciences);
- increasing responsiveness to the needs of today's and tomorrow's constituents;
- institutional arrangements that enhance efficiencies and reduce duplication within the national system, as well as effectively address regional and multi-state issues.

The Administration also values public sector-private sector partnerships as another means of leveraging scarce federal dollars. USDA currently focuses on two tools to bridge between public research and private economic opportunity. First, the 1986 Technology Transfer Act permits Federal laboratories to enter into Cooperative Research and Development Agreements (CRADA's) with universities, private companies, non-Federal government entities, and others. CRADA activity at USDA has increased rapidly since the program was first instituted in 1987. Between 1987 and the present, USDA has entered into over 650 CRADA's with private firms. Second, the Small Business Innovation Research Program, established in 1982, has been implemented at 11 Federal departments including USDA. In 1996, the USDA program will exceed \$10 million. Awards are made for initial exploration as well as precommercialization of research findings applicable to solving agricultural problems, including rural development.

Effectively meeting national goals requires a system of customer input, evaluation, and assessment. To ensure responsiveness to the public in meeting these goals, the Administration supports broad stakeholder access to priority setting processes and transparency in those processes. Two mechanisms currently used by the REE mission area are advisory bodies and the Government Performance and Results Act (GPRA).

Input from advisory bodies should always inform Federal government action, whether formally provided by the recently appointed National Agricultural Research, Extension, Education, and Economics Advisory Board (Advisory Board) or through informal interactions with stakeholders at the national, state and local level. Since being authorized, the Advisory Board has had one meeting and will

have its second meeting this month. The Advisory Board has provided the Secretary of Agriculture with advice on implementation of the Fund for Rural America, the composition of the Strategic Planning Task Force to review research facilities, and is considering recommendations on REE strategic plans and the reauthorization of the research title of the 1996 Farm Bill. We expect that the Advisory Board, over time, will more clearly define its role and, as Congress intended, will become an effective clearing house for numerous other advisory systems from the national, State and local levels.

Second, the Advisory Board will also be an integral part of the process of program review related to the implementation of the Government Performance and Results Act (GPRA). In response to GPRA, the REE mission area and agencies have developed a set of draft strategic plans, on which we look forward to consulting with you and the Committee, and we are in the process of developing performance plans. In the development of performance plans for research, education, and extension activities, we are considering adopting a combination of quantitative and qualitative measures. These techniques will be used to assess the quality, relevance, and timeliness of our research and education efforts. Adapted to the research, education, and extension context, we believe GPRA will serve us well, allowing us not only to conduct programs more effectively but also to be able to more accurately describe the value of those programs to society.

4. Wise strategy for public investment supports a diversified portfolio offending sources and mechanisms as well as diverse institutions performing research, education and extension.

The diverse portfolio consists of multiple funding sources and funding mechanisms as well as a diversity of institutions and performers. Our portfolio currently contains extramural funding in the form of formula funds, special grants, and competitive grants in addition to intramural funding. The Administration also recognizes that diversity among the institutions performing research, education, and extension is critical to ensuring that national goals are effectively met. A diversity of performers fosters creativity and innovation. It increases the number of perspectives on a problem, enriches competition among proposals, and induces competition to support the best work among funders, both public and private. Diverse funding alternatives give original ideas a better chance to find support than a more centralized system. As a result, a diverse system enhances quality of output and strengthens national capacity to respond to new opportunities and changing national needs.

The Administration supports USDA's mix of extramural programs in research, education, and extension, and is a proponent that formula or base program awards should allow and support maximum flexibility for states to use resources where they have the greatest ability to solve problems. The Administration also supports a strong Federal role in leveraging resources, and recent program efforts have emphasized multi-State, multi-institutional collaborations. Strengthening current mechanisms, such as the regional research program, which requires 25 percent of Hatch funds be used for multi-State efforts, and proposed mechanisms, such as set-asides for cross institutional extension, support this effort. Accountability to shared regional and national goals is also critical to this effort. As has been consistent for many years, the Administration does not support state-specific or commodity-specific special grants. The Administration does support mechanisms for multi-state research projects addressing problems of national or regional importance, such as water quality and integrated pest management. Wherever appropriate, the Administration supports nonfederal matching requirements to encourage maximum leverage of federal dollars.

The Administration also supports a balanced portfolio of intramural and extramural research. USDA relies on the REE agencies to provide the science base to fulfill its mission, and we have a historical commitment to strengthening university-based research and higher education. We look to the intramural agencies—the Agricultural Research Service (ARS), the Economic Research Service (ERS), and the National Agricultural Statistics Service (NASS)—as the primary performers of mission-oriented, problem-solving research and for the generation of statistical data important to program and policy decisions. The university-based scientists supported by CSREES produce a mixture of basic, applied, and developmental research that is key to American agriculture's future. Simultaneously, it disseminates new knowledge and new technology, and it trains the next generation of scientists and engineers.

Determining what constitutes an appropriate balance depends on the ultimate goals desired from the Federal investment. In past years, when budgets could be expected to grow every year, the question of appropriate balance between the intramural and extramural parts of the portfolio was not a major issue. With the pros-

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pect that the agricultural research budget will remain flat for the foreseeable future, it is of growing significance. The Administration has already expressed its preference for increases in university-based, competitive, merit-reviewed research to ensure that the Nation receives the highest quality return on its investment while maximizing the ties between research and higher education. The President's budget requests have consistently reflected this position. At present, we have little in the way of program evaluation to guide an assessment of the optimal proportions of extramural and intramural effort, but we look to GPRA as a way to introduce greater rigor into this much-needed analysis.

Intramural research conducted by the ARS addresses critical national issues requiring long-term commitments and specialized facilities, supports the research needs of action and regulatory agencies, and provides research required to support national or international policies and to meet international standards and certifications. This research is subject to an internal peer review process, which is currently under review. ARS research provides a critical resource base so USDA can rapidly respond to new problems and emergencies as they arise and supports long-term, high-risk research, in which the private sector is not likely to invest.

Federal laboratories contribute to our science and technology base in support of national goals and are an important part of our national science investment and infrastructure. It is a resource that must be continually renewed and renovated. Given the government-wide constraints on discretionary program funding and the priority this Administration places on strengthening support for research funding, careful consideration of the design of an infrastructure and its renewal is critical. We expect the Strategic Planning Task Force authorized in the 1996 Farm Bill to put forward significant recommendations regarding the best and most efficient use of future Federal investments in public agricultural research facilities.

Federal funds are currently distributed to the 1862, 1890, 1994, and Hispanic-serving institutions. In September 1996, President Clinton announced a Presidential Review Directive (PRD) to examine university-government partnerships. In cooperation with the National Association of State Universities and Land Grant Colleges (NASULGC), REE has begun to evaluate these partnerships. This will be a wide-ranging review, which we anticipate will be completed by late Fall 1997, containing recommendations that may be implemented using existing administrative authority. We will keep the Committee informed of our progress.

Mr. Chairman, Federal investment in research, education, and extension for the achievement of national goals has never been more critical to the success of the agricultural sector. While our system has served us well, clearly it is time to assess current programs, policies, and funding mechanisms to ensure those national goals are effectively met. The appendix accompanying this letter provides you with salient facts about the Nation's agriculture research and development, education and extension system. We expect to communicate to you our specific proposals for administrative and legislative change at the earliest opportunity. We look forward to the coming important debate about the future of the research, education, and extension system, and we look forward to working with you and members of the committee to strengthen the capacity of the research, education, and extension system.

Sincerely

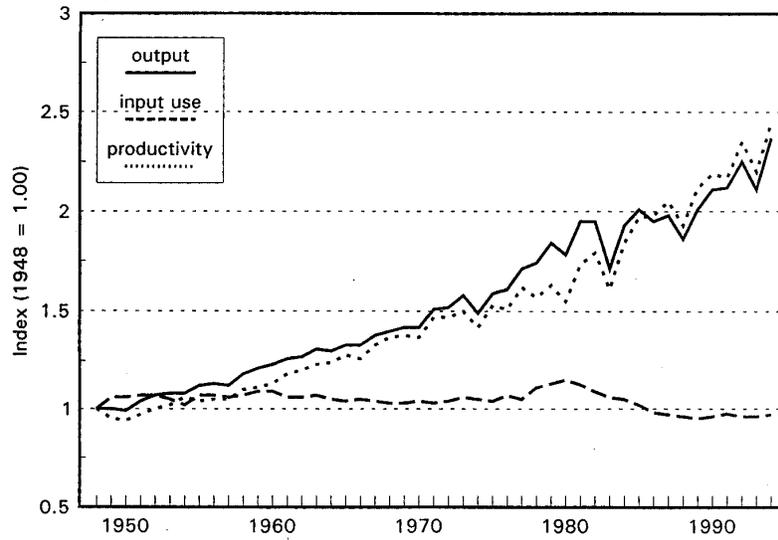
DAN GLICKMAN,
Secretary.

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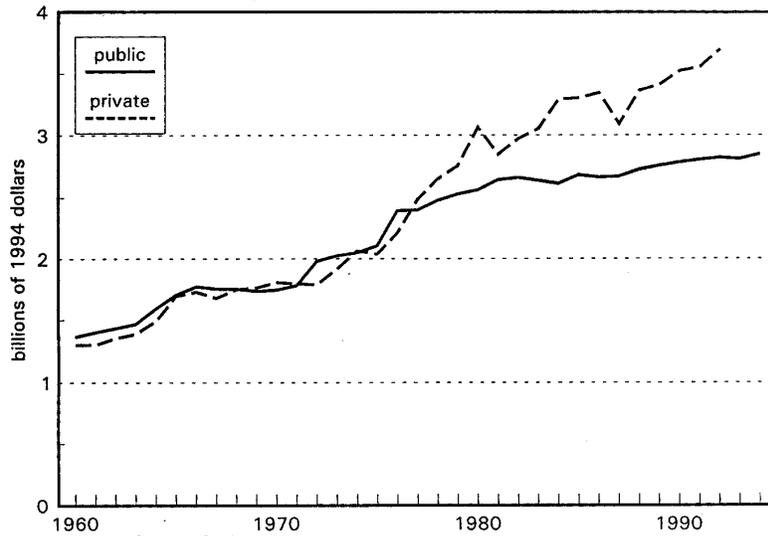
APPENDIX

U.S. Agricultural Output, Input Use and Productivity, 1948-1994



Source: Economic Research Service

Public and Private Agricultural Research Expenditures in the U.S.

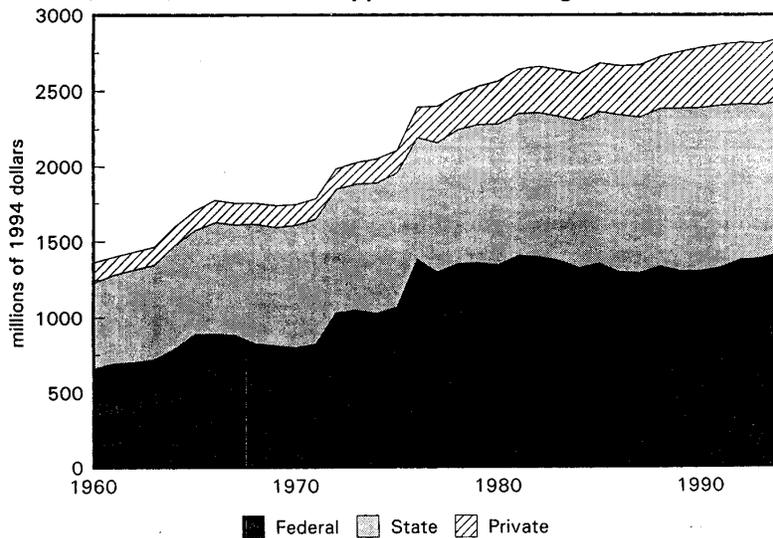


Source: Economic Research Service

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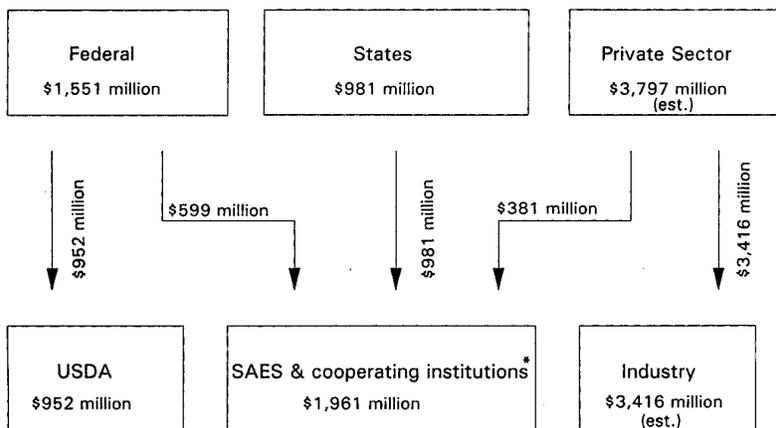
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Federal, State, and Private Support for Public Agricultural Research



Source: Economic Research Service

Sources and Flows of Funding for Agricultural Research in 1992



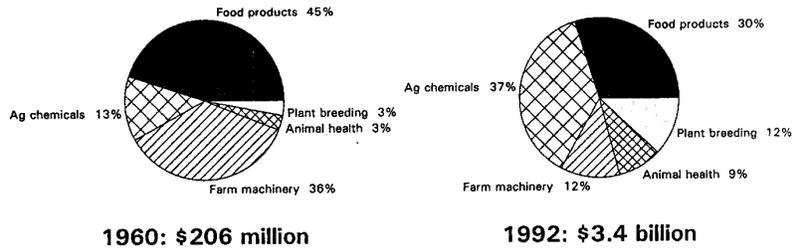
* State Agricultural Experiment Stations (SAES), 1980 schools, forestry schools, and veterinary schools.

Source: Economic Research Service

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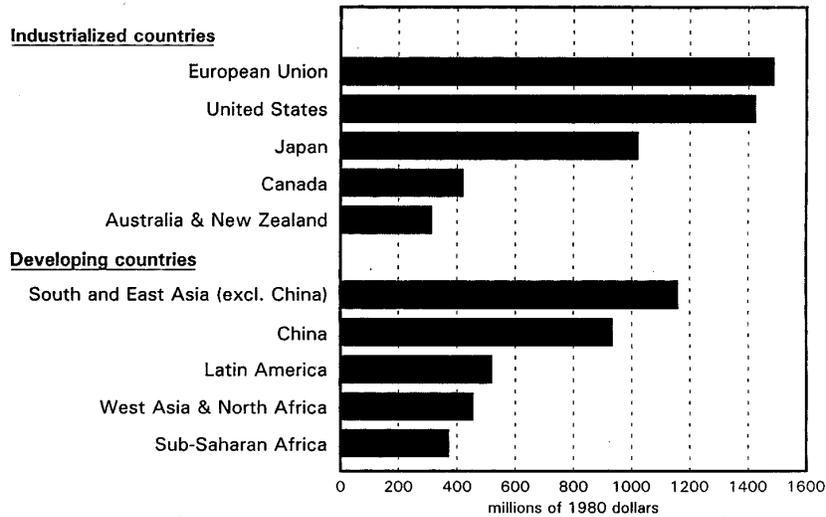
706

Private Agricultural Research by Industry



Figures in nominal dollars
Source: Economic Research Service

International Comparison of Spending for Public Agricultural Research

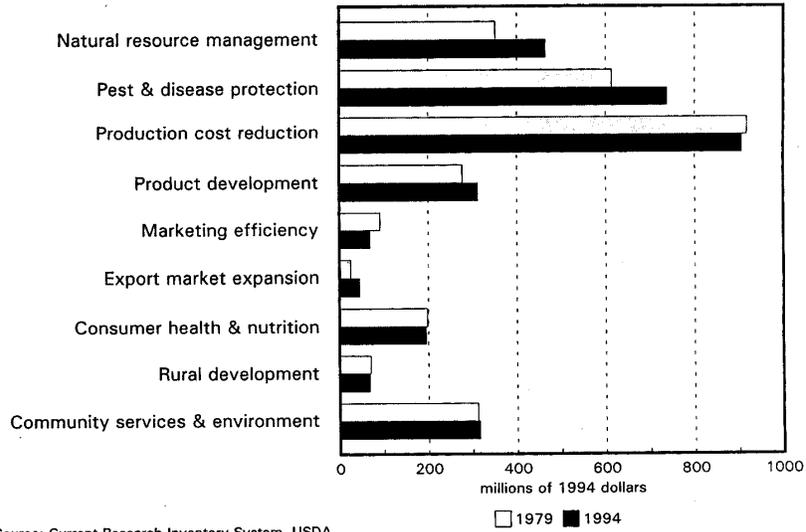


Figures report average annual spending between 1981-85
Source: International Service for National Agricultural Research

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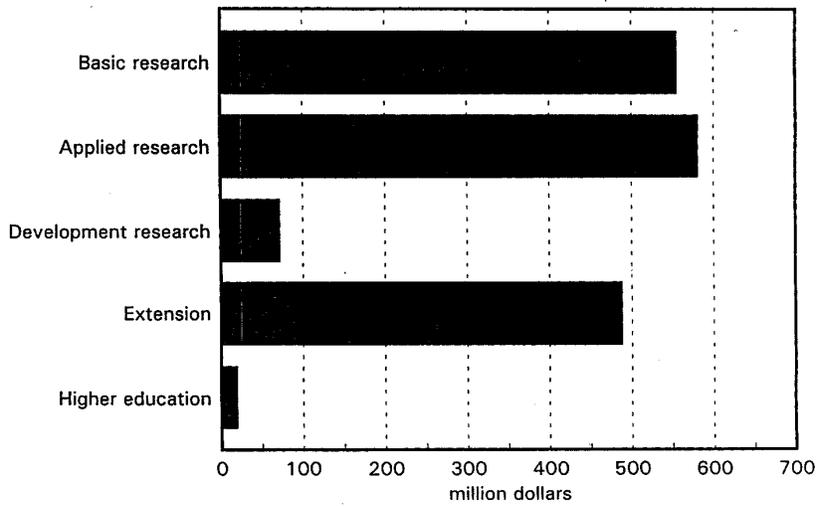
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Allocation of Public Agricultural Research Funds



Source: Current Research Inventory System, USDA

Allocation of USDA Research, Education, and Extension Funds



Figures are appropriated dollars for FY1996
Source: USDA

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USDA Technology Transfer Activities

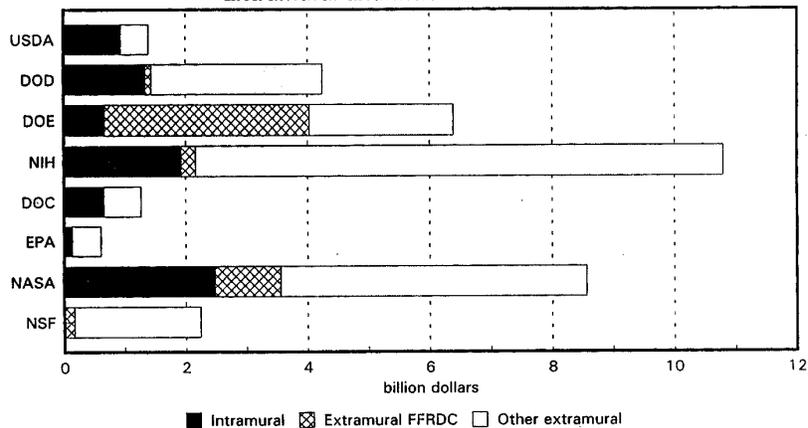
Year	Patents awarded Number	Patent license royalties Million dollars	Active CRADA's ¹ Number	Value of CRADA's ² Million dollars
1987	34	.085	9	1.6
1988	28	.097	48	8.7
1989	47	.42	86	15.6
1990	42	.57	104	18.9
1991	57	.83	139	25.6
1992	56	1.0	160	30.0
1993	57	1.5	185	34.0
1994	40	1.4	212	61.3
1995	38	1.6	227	80.1
1996	53	2.1	258	98.9

¹ Number of Cooperative Research and Development Agreements (CRADA's) with the private sector.

² Value of CRADA's includes the total value of USDA and private-sector resources committed to CRADA's.

Source: Agricultural Research Service

Federal R&D by Agency, FY 1995 Extramural and Intramural Shares

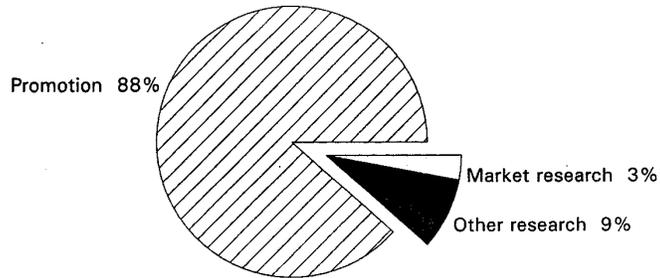


Federally Funded Research & Development Centers (FFRDC) are extramural contract laboratories. Other extramural includes R&D funds to universities and colleges, industrial firms, non-profit institutions, state and local governments, and foreign institutions. Figures for USDA include funds for research and exclude funds for cooperative extension. Figures for DOD include funds for research and exclude funds for development. Source: National Science Foundation

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Agricultural Research and Promotion Activities Funded by Commodity Check-off Programs



Total Assessment: \$451 million

Source: Agricultural Marketing Service

Rate of Return to Public Agricultural Research with Adjustments for Possible Estimation Biases

Source of adjustment	Rate of Return (%/year)
Unadjusted rate of return	60
Sources of possible measurement bias and their effects on estimate:	
Inclusion of private sector research	- 9
Costs of tax collection	- 6
Longer research and adoption lags	- 10
Commodity program distortions	negligible
Environment, health, and safety effects	+/-
Structural adjustment and labor displacement costs	+/-
Rate of return after adjustment	35
+/- = effects could be positive or negative	

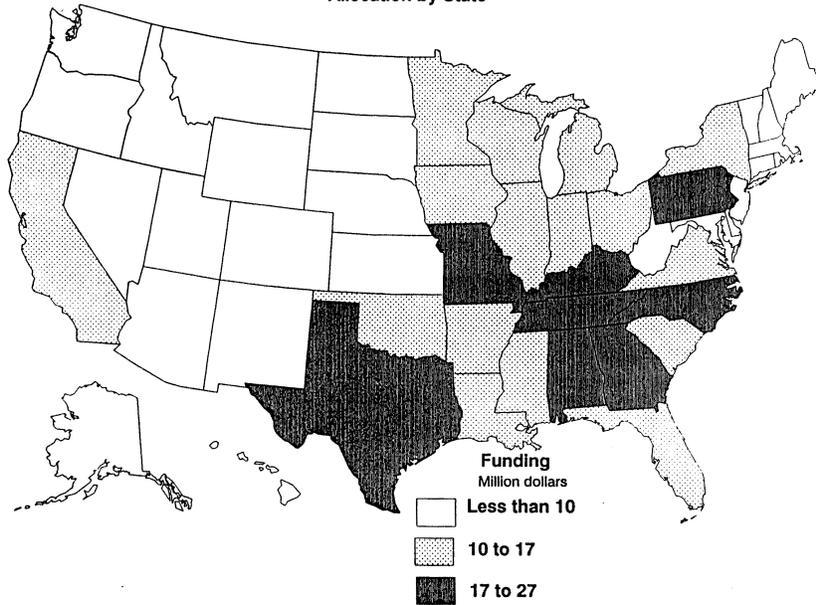
The rate of return measures the annual stream of benefits resulting from today's research. For example, a rate of return of 35% implies a stream of benefits of 35¢/year resulting from an initial \$1.00 investment in research.

Source: Economic Research Service

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Federal Formula Funds for Extension and Research, FY 1996 Allocation by State



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swers and views will be helpful as we formulate legislation to reauthorize these important programs.

I will appreciate your review of these questions and would value your answers to as many as you feel able to address. I would appreciate hearing back from you by March 14. Please feel free to share these questions with others who have an interest in agricultural research, extension and education. I look forward to hearing from you soon.

Sincerely,

RICHARD G. LUGAR,
Chairman.

AGRICULTURAL RESEARCH, EXTENSION AND EDUCATION

QUESTIONS FOR CONSIDERATION FOR 1997 REAUTHORIZATION

RESEARCH SYSTEM STRUCTURE

If the U.S. agricultural research, education, and extension system was created today, how would it be structured to maximize the social rate of return on federal funds committed to the system? How would such a system compare to the current system, which traces its roots back to the Morrill Act of 1862?

USDA's research budget for in-house research is more than twice the average for all government agencies. What type of research should be conducted in-house by ARS and what research can be done as well and more cost effectively by nonfederal institutions?

Is there a need for a college of agriculture in every state or should there be a greater effort to regionalize agricultural research (such as develop regional centers of excellence that link researchers from various states to work on research of regional importance)? What would be the impact of such a change on states with smaller colleges of agriculture that may end up closing or losing resources?

How should the more than 100 ARS laboratories be consolidated to increase efficiencies, reduce duplication with land grant research, and maintain the "critical mass" of scientists and equipment needed to ensure quality science?

Should limited federal funds be spent to construct research facilities at and for land grant and other universities?

How should our research system structure and delivery be changed to be prepared to meet the challenges of the agriculture sector in the next century?

FUNDING MECHANISMS AND ISSUES

In federal funding of agricultural research, what would be the ideal allocation of funds for basic and applied research? What has historically been the allocation and what is it today?

Federally funded agricultural research is allocated among intramural funds, formula funds, competitive grants, and special grants. Are these the most effective methods of allocating funds? If not, what is a more effective method? If they are, what is the proper balance between intramural funds, formula funds, competitive grants, and special grants?

Should receipt by land grant universities of federally-funded agricultural research and extension funds be contingent on their ability to demonstrate that a wide variety of stakeholders have dedicated to public goods in which the private sector is unlikely to invest?

What percentage of ag research funding is attributable to non-competitive funding sources, including special grants? What is the corresponding percentage for other major federal research entities including NIH, NSF, NASA, etc.? If there are significant differences, why do they exist?

The U.S. Department of Agriculture (USDA) differs from other federal agencies that support science in that the majority of agricultural research—more than 60 percent—is done in-house, by the Agriculture Research Service (ARS). (Other major federal research agencies, such as the National Institutes of Health and National Science Foundation, award more than 80 percent of their research funds competitively to scientists at a wide range of extramural laboratories.) What would be the costs and benefits of initiating a transition to a more NIH-like approach (with competitive grants as the main delivery system of federal funding) to federal agricultural research? Would this approach provide greater public return on the investment?

There is widespread support for increasing the percentage of federal agricultural research funding that is awarded competitively, as well as increasing the amount

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of dollars available for such grants. Assuming continued fiscal constraints, the options for meeting this demand are 1) to use savings stemming from changes in mandatory spending programs; 2) to redirect a portion of formula funds and special research grants to the current competitive grants program; or 3) to redirect a portion of ARS funding to this purpose. What would be the costs and benefits of implementing any one or a combination of these approaches?

Should the formulas by which food and agricultural research and extension funds are allocated within the land grant system be revised to better reflect changing state demographics and the increasingly diverse food and agricultural research community? Are these formulas appropriate for the research and extension needs of the 1990's and beyond? Would a regionally based (rather than state) formula approach better serve or provide a greater return to agriculture? What impact would changes in these formulas have on land grant universities?

How do smaller universities fare in the competitive grant process? Is it appropriate for the federal government to "set aside" a portion of the grant for these smaller universities?

EXTENSION SERVICE ISSUES

In the absence of federal funds for the Extension Service, would states and localities continue to provide the service? Could the federal funding role be replaced by a memorandum of agreement elicit increased state or private funding for agricultural research?

COORDINATION AND PRIORITY SETTING PROCESS

Are there overlapping missions and duplication of effort between federally conducted research and research conducted by universities and the private sector? Is there duplication with research funded through research and promotion programs (check-offs)? How can the mission and focus of USDA's and land grant universities' agricultural research program be more clearly defined to better complement one another and avoid unnecessary duplication?

Since the private sector accounts for the preponderance of total agricultural research spending, what processes exist to ensure that public research does not unnecessarily duplicate efforts already underway among private researchers? If no or few processes exist, is it desirable to develop them? If so, how could they be reconciled with the need to protect confidential business information?

What is the best process to use to set priorities for research, extension and education? Should additional guidance be given to the newly authorized National Agricultural Research, Extension, Education and Economics Board regarding how it is to function? What priority setting process should be used to ensure that recommendations reflect the needs of those who benefit from and utilize agricultural research conducted by or funded by the federal government? Is it important to evaluate whether priorities have been followed when research funds have been awarded?

ACCOUNTABILITY

What is the American public getting for its \$1.8 billion annual investment in agricultural research? (For example, how much funding goes to scientists versus administration and facilities, how many USDA and land grant universities are doing research in similar areas, and how many prestigious scientific awards for agricultural research go to USDA, university and private sector scientists respectively.) What is the best criteria to Judge whether the federal government is getting the most for its agricultural research dollars?

With growing accountability in government (for example, GPRA), how should federally-funded agricultural research results be measured and their impacts evaluated? Is there a body of science that can be used to measure research results and impacts? If so, is it currently being used?

CHILDREN'S HOSPITAL NUTRITION CENTER

Senator BUMPERS. When I first came here Bill Proxmire was the keeper of research money, and he came down 180 degrees. I voted against him every time I got a chance, because he always wanted everything to go on a competitive basis, which meant MIT and Harvard, and Stanford, and Cal Tech, and places like that, and other places who are capable of doing an awful lot of research

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never got considered because they did not have prestige and certainly they did not have the reputation some of these others did.

As I say, the proof is in the pudding. If you go look at some of these research centers that some of us on this committee have fought to get for our States you will find they are doing really excellent work.

Which brings me, Dr. Horn, to the nutrition center at Children's Hospital. I understand you visited that, is that correct?

Dr. HORN. I have been to that center and the other several times, including the one that I am sorry to say has got a basement full of water this week at Grand Forks, ND.

Senator BUMPERS. There are six of those in the country.

Dr. HORN. That is correct. That is a very important program for us. You will note in the President's budget request that we have a human nutrition initiative which, although it does not say it, is intended to make stronger the linkage between agriculture and human nutrition.

A good bit of the research that would be done under the auspices of that increase is to identify phytoactive compounds in foods that, in fact, can promote health and prevent disease.

USDA, of course, has the mandate to do nutrition work on behalf of healthy Americans as opposed to sick ones, and our intent is to develop a program that will prevent illness through this initiative.

The time is right. There are new technologies available to us that allow us, we think, to make some major breakthroughs in health care and prevention, and we are hopeful that this will be a real shot in the arm for those six centers.

Senator BUMPERS. Incidentally, Dr. Horn, I want to come back to nutrition in just a moment, but did you know that the rice-growing States are now producing more and more rice for Japan? It is a species developed by the Japanese, but we are growing it, and growing it very successfully, and we are exporting it to Japan. Are you familiar with that?

Dr. HORN. Yes; I am. In fact, one of the great achievements of the Department is to open up that market. And although I would say that U.S. long grain rice has always been world class standard, this rice that we are growing for Japan is a major addition for our international trade.

Senator BUMPERS. Our farmers love it because they get more for it than they do on the domestic market.

Dr. HORN. Yes, they do.

Senator BUMPERS. Back to nutrition. Mr. Chairman, I will yield. I just want to make this point. For those of us who have had chest pains in our life and still go for stress tests, the question is always first are you working out? Answer, yes. And what is your dietary habits, and so we go through that.

Now, that is an adult question, and I am talking about really the pediatric nutrition center at Children's Hospital in Little Rock, but I can tell you that so many of the health problems in this country, an unbelievable number of the amount of health costs in this country is directly related to poor nutrition.

I watched—you know, I have watched the Children's Hospital and Medical Center wrestle with these nutrition problems for a long time, and we have done quite a bit of research, but we still

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really—I consider that to almost be in its infancy, because we still do not really know—we know fat is bad for you, but we do not know how much of it, where the threshold changes, and when it comes to infants, you know, you saw the conference over at the White House the other day where the first 3 years of a child's life is absolutely critical to the very life of that child, and a large part of that deals with nutrition.

Now, we learned a long time ago that a good protein diet during the fetal period as well as during the neonatal period—we learned a long time ago that protein builds brain cells, and if you do not have a decent protein diet for both the fetus and the infant, that child's brain is not going to develop right. That is the reason we started the WIC Program, to make sure that poor pregnant women get a decent diet, get a good protein diet.

And I must say, we had all these people come and testify the other day for another subcommittee on appropriations. Rob Reiner, who has a program of his own—but in any event a couple of Governors and a psychiatrist from Houston, Baylor University Hospital there, and they were all honed in on this research which has determined, and as far as I know—I didn't know this was new. I thought this was old information, how critical the first 3 years of an infant's life is.

But it goes to a lot of things. It goes to how much attention they get, how tenderly they are handled, a whole host of things, their environment, but at the top of the list is nutrition, what kind of diet they get, so, I think these pediatric nutrition centers serve a great purpose, and I am convinced we are just in the infancy of deciding what we really need to be doing now.

I might say—this has nothing to do with agriculture, but I asked those people the other day, if you know that, then the next question is, what are we doing here in Congress? First of all you have to have a decent home for that child's first 3 years. Second, you have to have decent health care for that child's first 3 years, and you have to have devoted, caring parents.

I have said many times that talking about family values is a wonderful thing. I do not like for people to lecture me on family values. I have got the greatest family anybody could have. That is why I do not like for people to tell me about family values. I know that.

But I can tell you one thing, there are a lot of children in this country that would be better off anywhere than where they are, so to say that does not conflict with family values. Some people ought to be taken out of the environment they live in, and as I say, that has nothing to do with agriculture.

Coming back, it is a whole host of things that make a healthy, bright child, and to say that it all happens in the first 3 years is one thing, but the really basic question is, How do you determine how that child is going to get all that tender loving care during the first 3 years? I chose my parents well. A lot of people do not.

Do you have any comments on what I just said, or did I say it all? [Laughter.]

Dr. WOTEKI. I think definitely we would agree with you that the first 3 years of life are extremely important for children and that

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nutrition plays a very critical role both in a successful pregnancy, a healthy baby at birth, and in that child's development.

I mentioned in my opening statement the fact that we have been involved with some strategic planning over the last year and a half to respond to the Government Performance and Results Act, and as part of that we have identified some major goals for our research program.

One of them is a healthy, well-nourished population. That planning activity has given us a lot more insight into how we can transfer the findings of research from places like the Children's Hospital in Arkansas and our research center in Houston, which also focuses on the nutritional needs of women during pregnancy and of their children in their most formative years, very quickly to the public, and to educators who are working with the public.

We have, on a trial basis, had an extension educator located at the Human Nutrition Research Center in Houston, and that person has taken the primary responsibility for taking those research results and getting them out quickly to the extension community so that they can be helping parents such as you have just described, and also so that that information can be folded into some of our other education programs like the Expanded Food and Nutrition Education Program, which provides information on good nutrition and how to make food purchases on a limited budget to families that are of limited means.

So, this reorganization that has occurred within the Department within the last couple of years that created this organization that sits before you, research, education, and economics, gives us the opportunity to move the research results into the applications much quicker and address some of your concerns about healthy mothers, healthy babies, and maximizing their growth.

Senator BUMPERS. You are asking for a \$6 million increase in that program. I applaud that. It ought to be a lot more than that, but Senator Cochran has the responsibility of making the money fit here, and the committee has additional responsibility.

Mr. Chairman, that is the end of my story.

Senator COCHRAN. Thank you very much, Senator.

Dr. Woteki, I have a number of questions on various subjects that I am going to submit, one of which involves this integrated pest management.

I am going to ask some specific questions to Dr. Horn and his staff on that subject, but I know that one of the goals of the integrated pest management initiative is to bring much of the Nation's farmland under integrated pest management practices by the year 2000.

Can you give us a status report as to what has been accomplished in that regard to date, and what the additional funds you are requesting for 1998 for this project will achieve?

INTEGRATED PEST MANAGEMENT

Dr. WOTEKI. Yes, Senator; I can. I am fumbling here. I had put aside some special notes which I cannot seem to put my hands on immediately with respect to IPM, but we do within our budget request have an increase for IPM that involves actually three dif-

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ferent agencies within this area, the Agricultural Research Service, CSREES, as well as the Economic Research Service.

You are correct in identifying that the Department has a goal of bringing 75 percent of crop acreage under IPM practices by the year 2000, and the initiative that is included in our budget this year addresses not only research in support of meeting that objective, but also extension education programs, as well as monitoring programs or surveys, essentially, to monitor our progress toward meeting those goals.

I would like to start with ARS, since your question was immediately addressed toward ARS, but as far as IPM activities go there are two other agencies within the mission area that are also included within this initiative.

So, Dr. Knipling, would you like to address the ARS part?

Dr. KNIPLING. Well, Mr. Chairman, IPM is, of course, a very important part of the ARS program. It literally touches just about everything we do at most of our laboratories.

Our proposal for 1998 does call for a \$4 million increase in this area, and that is on top of about an \$18.5 million program at the present time.

Specifically for next year we want to emphasize the areawide pest management program. That is, to try to pull together many of the things we have learned in past programs and to actually apply it on an areawide basis, perhaps in almost a validation demonstration mode, working with the growers, the extension people, and many other parties, private industry as well.

Senator COCHRAN. Where will you undertake this research?

Dr. KNIPLING. Funding for this program is slated to be allocated on a competitive basis that we will manage.

Senator COCHRAN. Are you spending money in this way in this fiscal year?

Dr. KNIPLING. We have that program underway now.

Senator COCHRAN. Where is the research being undertaken now?

Dr. KNIPLING. Three programs are underway now, one in the Pacific Northwest oriented toward codling moth in apples and in pears, in the upper Midwest on the corn rootworm, and in the Midsouth on cotton insects. Those are the three main programs currently in place.

Senator COCHRAN. Where is the research being undertaken?

Dr. KNIPLING. In the Pacific Northwest it is based out of our Wapato, WA, laboratory. In the upper Midwest, there are several locations, with Brookings, SD, administering the program and then in the Midsouth, the program is based out of Stoneville, MS.

Senator COCHRAN. Can you give us for the record what the exact projects are and where they are being undertaken?

Dr. KNIPLING. Yes; we can provide that for the record.

Senator COCHRAN. And where the money, the \$4 million for IPM research will be spent next year under your program?

Dr. KNIPLING. Yes; we can provide that for the record.

[The information follows:]

AREAWIDE IPM PROGRAM

Of the \$4 million requested, \$1 million will be used for Areawide IPM and pilot test programs; \$2 million will be used for augmentation biocontrol and biologically-

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based IPM in field, horticultural and vegetable crops; and \$1 million will be used for host-plant resistance and related pest management strategies.

The current location of the ARS Areawide IPM test sites are as follows:

1. Southern Insect Management Research Laboratory, Stoneville, Mississippi
Cotton Bollworm/Corn Earworm/Tobacco Budworm Research Sites:
 - Washington County, Leland/Stoneville, MS
2. Fruit and Vegetable Insects Research Laboratory, Wapato, Washington
Codling Moth Research Sites:
 - Progressive Flat, Obanogan, WA
 - Brewster Flat, Brewster, WA
 - Manson, WA
 - West Wapato, WA
 - Lake Osoyoos, Oroville, WA
 - West Parker Heights, WA
 - Howard Flat, Chelan, WA
 - Ukiah, CA
 - Randall Island, CA
 - Medford, OR
3. Crop and Entomology Research Laboratory, Brookings, South Dakota
Corn Rootworm Research Sites:
 - North Central IL/IN (on the border) in Eastern Iroquois County, IL (near Sheldon); and Western Benton County, IN (near Sheldon, IL)
 - Northeastern IA, Jackson County, Preston, IA
 - North Central KS, Republic County, KS (near Scandia)
 - Southeastern SD, Brookings County, Brookings, SD

AREAWIDE PEST MANAGEMENT PROJECTS

1. *Research Project on Cotton Bollworm / Corn Earworm:*
 - Control Strategies for *Heliothis/Helicoverpa* SPP. and Other Field Crop Insects in Cotton Agroecosystem, Stoneville, MS
2. *Research Projects on Codling Moth:*
 - Areawide Pest Management of Corn Rootworm in Maize Production Systems conducted at Progressive Flat, Okanogan, WA; West Wapato, WA; Lake Osoyoos, Oroville, WA; and West Parker Heights, WA
 - Codling Moth Areawide Management Project, Brewster Flat, Brewster Heights, WA; Hanson, WA
 - Areawide Codling Moth Pilot Test Project, Howard Flat, Chelan, WA
 - Codling Moth Areawide Management Project, Mendocino County, Ukiah, CA
 - Areawide Management of Codling Moth Using Mating Disruption, The Randall Island Project, Randall Island, CA
 - Areawide Suppression Program for Codling Moth in Oregon, Medford, OR
3. *Research Projects on Corn Rootworm:*
 - Development of a Corn Rootworm Areawide Management Program, North Central IL/IN (on the border) in Eastern Iroquois County, IL (near Sheldon); and Western Benton County, IN (near Sheldon, IL)
 - Development of a Corn Rootworm Areawide Management Program in Iowa, Northeastern IA, Jackson County, Preston, IA
 - Development of a Corn Rootworm Areawide Management Program in Kansas, North Central KS, Republic County, KS (near Scandia)
 - Areawide Pest Management of Corn Rootworm in Maize Production Systems, Southeastern SD, Brookings County, Brookings, SD

INTEGRATED AND AREAWIDE PEST MANAGEMENT—\$4,000,000

Areawide IPM and Pilot Test Programs—\$1,000,000.—Headquarters.

Augmentative and Biologically-based IPM in Field, Horticultural and Vegetable Crops—\$2,000,000.—Stoneville, MS, Orlando, FL, Beltsville, MD, Gainesville, FL, and Weslaco, TX.

Host-Plant Resistance and Pest Management Strategies—\$1,000,000.—Stoneville, MS, Ames, IA, and Raleigh, NC.

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CHEMICAL/NONCHEMICAL RESEARCH

Senator COCHRAN. Is there any way for you to break down your chemical and nonchemical research components that fall within the general area of integrated pest management?

Dr. KNIPLING. Yes; we have that data. The vast majority is actually oriented toward nonchemical research, employing biological control and genetic mechanisms. Certainly when we get into the integrated pest management arena, that implicitly embodies all types of approaches in some combination. So, we probably could not discretely break out the pesticide part of IPM, but we can for other parts of our pest control program.

[The information follows:]

ARS CHEMICAL/NONCHEMICAL PEST CONTROL RESEARCH

Of the \$134 million ARS spends on pest control research in fiscal year 1997, \$106,799,000 is devoted to non-chemical pest control and \$27,437,000 is devoted to chemical pest control. The \$134 million total can also be subdivided into other categories: \$53,770,000 is allocated to biocontrol, \$18,544,000 to integrated pest management, and \$61,922,000 to other pest control programs.

ARS research on non-chemical means of pest management includes fundamental studies of the taxonomy, biology, ecology, physiology, pathology, metabolism, and nutrition of pests and host plants and animals; as well as development of non-chemical means through natural enemies such as predators, parasites, and pathogens of pests, pest resistance, sterile insect technology, naturally-derived attractants and repellents, and cultural and physical control practices.

ARS research on chemical means of pest management deals with technologies and systems to reduce chemical pesticides and improve upon the timing, safety, and efficiency of their use in concert with environmental and economic goals. ARS does not devote any resources to the development of new chemical pesticides, but does evaluate new ones developed by industry and other cooperators. More specifically, our efforts on chemical means is largely directed at improving pesticide use patterns, including development of safer, more effective ways to use chemical pesticides in pest management schemes by timing, formulations, and modes of application; improved detection and measurements of pesticides and metabolites; and ways to eliminate or minimize chemical residues.

NATIONAL RESEARCH INITIATIVE

Senator COCHRAN. Dr. Woteki, the National Research Initiative is another major goal for research, and it is, I understand, going to get under your budget an increase of \$36 million, a 38-percent increase from this current year level of funding if we approve the request. We understand from your statement that the research is primarily in three areas, food safety, genetic enhancement of plants, and environmental quality.

Could you tell us anything about the results that the national research initiative has produced in terms of direct, quantitative benefits or anecdotal successes to date?

Dr. WOTEKI. Well, I am going to call on Dr. Bob Robinson to give you some anecdotal evidence of success for the National Research Initiative, but before I ask him to do that I want to indicate to you that we are intending to do a review of the NRI to essentially assess its performance over the first 6 years or so of its life. It seems like it is an appropriate time to begin such a review.

The current chief scientist for the National Research Initiative, Dr. Ron Phillips, is actually the person who recommended that it is appropriate to do such a review at this point in time, and those

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of us in leadership within the mission area and who sit on the NRI's board very heartily endorse that idea.

He has as well collected some information about the NRI and the specific achievements of research that is funded under it, and is planning to make that more generally available so in the near future you need to be looking for some information we will be providing to you on a rather routine basis about the NRI's accomplishments.

Having said that, I would like to ask Dr. Robinson to highlight some specifics for you.

Dr. ROBINSON. Thank you, Dr. Woteki. The question that you have posed really has very many nice things to report, and I am certainly not going to be able to get them all here. What I would like to do perhaps, Senator, is to give you a few and then send you a brief which has a rather significant array.

Senator COCHRAN. That would be helpful.

[The information follows:]

COOPERATIVE STATE RESEARCH, EDUCATION, AND EXTENSION SERVICE NATIONAL RESEARCH INITIATIVE ACCOMPLISHMENTS

In the summer of 1996, about 400,000 of Bt corn was grown in the U.S. Bt corn has a bacterial gene incorporated into the corn genome that produces a toxin extremely effective against the European Corn Borer. Estimates are that 3.4 million acres will be grown in 1997. Although this product is viewed as developed by industry, public research laid the groundwork for its development. The National Research Initiative (NRI) has funded considerable work on *Bacillus thuringiensis* (1) for determining the way Bt toxin destroys its insect host so that the most effective Bt genes can be incorporated into the engineered plant, and (2) for understanding the biochemical and ecological basis of insect resistance to Bt so that resistance problems can be avoided or delayed with the engineered crop. Other NRI funding has allowed the molecular genetic mapping of corn leading to efficient means for crossing the transgene into various elite lines, documentation of the genetic behavior of tissue cultures facilitating the regeneration of corn plants with the Bt gene, etc.

The safe handling of food has been enhanced through NRI funded projects. One of the outcomes is the isolation of protein—invisible when applied to food preparation surfaces such as cutting boards—that binds firmly to the surface but does not allow harmful bacteria to bind. If they do bind, the protein kills the cells. This product is called Nisin, developed by researchers at Oregon State University. The medical field is considering Nisin's value in treating mechanical devices used in medicine.

The Spider Lamb Syndrome—SLS—is a congenital skeletal defect controlled by a single recessive gene. Lambs that carry the gene in heterozygous condition—carriers—are perfectly normal—but matings between two carriers produce defective lambs in about 25 percent of the progeny. Knowing that breeding stock carries this gene reduces their value by about 70 percent. The gene is becoming more and more prevalent in the Suffolk and Hampshire breeds. In 1994, the NRI published a "Research Highlights" publication page indicating that research had been funded to discover a marker gene that might allow farmers to know when a ewe or ram carried the gene. In the ensuing years, a marker was found that would allow the identification of such carriers with 92 percent accuracy. Using the chromosome map position of this marker gene in sheep as a guide, Utah State University researchers looked for the marker on the human molecular genetic map. At about the same distance from this marker gene as found between it and the SLS trait in sheep, the researchers noticed that a human trait had been mapped that also influenced skeletal development. Using the human gene as a probe onto the DNA from progeny segregating for the SLS, the researchers found that this gene was 100 percent associated with the trait. By this series of discoveries, we now have available not only a perfect molecular genetic tag to know when a lamb is a carrier, but the exact gene causing the biochemical defect is now known.

Several wild species of tomatoes produce seemingly worthless small—½-inch diameter—green fruit. It is not surprising to find that these wild tomato species furnish genes for cold tolerance, virus resistance, insect resistance and increased solids. What is surprising is that a Cornell University researcher, through NRI funding,

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found that these green tomatoes possess genes that will make our normal red tomato even redder. The researcher has found that the use of the molecular genetic map of tomato, also developed in part through NRI funding, allowed him to detect genes in the green wild tomato that have an effect directly opposite to what one would expect. The researcher also found that these tiny fruited tomatoes have genes that will increase yield in our normally cultivated types.

Researchers at Purdue University have developed a system to use corn grits—ground corn kernels—to take the water out of ethanol produced from corn, a system now used to process 750 million gallons of ethanol per year at a significant cost savings over other methods. Through NRI support, the technology is being extended to new applications. For example, modified grits are being examined as a replacement for expensive inorganic desiccants in pressure swing dryers to provide dry air or other gases for use in paint spraying, ozone generation, and pressurization of power and communication cables. In addition, corn grits are being examined as a low-cost, natural desiccant for air conditioners based evaporative cooling; in this application, the grits can help displace ozone-depleting chlorofluorocarbons and tap into a \$26 billion global market.

SOYBEAN NEMATODE RESEARCH

Dr. ROBINSON. Let me begin with one that I have used before which I find absolutely intriguing from the point of view of using fundamental science for a really basic problem, the really basic problem being nematodes with soybeans. The fundamental question is, How does it happen? How does the nematode actually destroy the soybean's productivity?

Scientists from North Carolina State University have discovered, it does it by exuding an enzyme which triggers a genetic trigger inside the soybean plant that says divert food to the nematode, and with some manipulation and fundamental biological science, scientists at North Carolina State University have been able to change that coding structure in a way that the plant now ignores the enzyme's messages to the genetic structure, and the nematode starves—very basic science applied to a very real problem.

We actually find that when we can go across the country and really look at developments all the way around, improving crop yield and disease resistance—for example, many plants have evolved very sophisticated systems to prevent inbreeding and promote outcrosses.

One mechanism is self-incompatibility, a genetic barrier to self-fertilization. For example, pollen of one genotype is not able to fertilize the ovule of the same genotype. In many plants this is controlled by a protein which rejects its own pollen.

Senator COCHRAN. A protein?

Dr. ROBINSON. A protein. Using the petunia, a very simple plant, scientists at Penn State University were able to use an approach in which they turned that protein around and actually, then, by turning the protein around they prevent the petunia from rejecting its own pollen and allow a cross, and what this is able to do in the future in terms of productive agricultural crops opens a wide array of possibilities.

NEW VACCINES

NRI funds have supported the development of new vaccines that deal with the viral diseases of pigs, for example. According to the National Pork Producers Council the porcine reproductive and respiratory syndrome is the most important animal health problem facing pigs, and researchers at South Dakota University, using

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funds from the NRI, have identified and characterized the agent that causes this very significant disease, and the work subsequently led to the development of the first vaccine, which is currently used by swine producers throughout the United States.

Similarly, tests have been developed to save new chicks. Researchers at Ohio State, Mississippi State, and Purdue University have developed tests that quickly and accurately detect a highly contagious viral infection of new chicks in order to prevent tremendous losses.

AQUACULTURE RESEARCH

From your State, saving catfish, one of the worst diseases affecting the catfish industry is a winter disease that I cannot even pronounce, but basically—

Senator BURNS. Give it a shot.

Dr. ROBINSON. Saprolegniosis. About 10 percent of catfish die from this disease each year, and it creates enormous economic losses, between \$20 and \$40 million in the catfish industry alone, and until recently there was no treatment for the disease, until a discovery was made as a result of research funded again under the NRI program, and scientists at the University of Mississippi, while studying the disease mechanisms and immunity, discovered that it could be prevented by adding formula or diquat to the water at concentrations presently approved already by the Food and Drug Administration in the catfish ponds.

These are just a few of the examples, and one of the reasons I picked the ones that I did is it addresses a question that Senator Bumpers asked earlier, and that is, do just the large prestigious universities, or do all universities participate, and I picked an array of them, because a number of universities participate in the NRI.

Senator COCHRAN. I did have a chance to visit Mississippi State University and see firsthand some of the research being done on catfish diseases, and was impressed with the hard work and the commitment of the scientists there and their prospects for success, and saw photographs of just what you were talking about, whole catfish ponds almost just full of dead fish, and so it is a devastating problem to the industry.

This has become one of the largest single employers in the State of Mississippi. It is a big, big industry now, and somebody told me the other day that if you buy a filet of farm-raised catfish in a supermarket, the probability is that it came from Mississippi, that it was produced, processed, and marketed from there. Eighty-five percent of the total fish being sold—this includes value-added catfish products—are coming from the State of Mississippi now, so it has had a very big economic impact in our State.

The potential for other kinds of aquaculture, too, we are seeing developed. The so-called cold water aquaculture, I am now finding out—Senator Byrd has explained that to me recently—has great prospects as well.

There is another facility I visited recently, too, I wanted to ask you about—the National Center for the Development of Natural Products which is in Oxford, MS. To support the ARS scientists at the facility, does your budget request additional funding?

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Funds also are still needed to complete that facility, and I was worried about the comments that were made about cutting out some of these funds in the President's budget.

I hope the committee will approve funds for completion of that facility as well as provide additional support for the research program so these scientists will be able to carry out their mission. I note that funding is included in the budget request to support the ARS natural products research program at the Center, so I hope we can work out maybe getting your support too for providing the additional resources I just indicated are needed for fiscal year 1998.

Dr. WOTEKI. Certainly, Senator, as part of the approach we are taking to facilities, given that this review is going to be ongoing for the next 2 years, projects that are in construction at this point in time will be completed.

Senator COCHRAN. The funding request which you have submitted also talks about the Government Performance and Results Act, and I remember from my service on the Governmental Affairs Committee the development of that legislation, and I know that you are conducting work to develop strategic plans. You have had regional listening sessions on the plans, and you are drafting a performance plan at the Department to implement this act.

My question is can you tell us, or maybe submit for our record, what funding has been necessary and the number of staff-years which have been utilized by the agencies under your jurisdiction for this fiscal year for activities related to the implementation of the Government Performance and Results Act? Since no funding is specifically provided for these activities, I am curious about where the money is coming from, which activities are supporting the funding and staff for this project. You may know that.

Dr. WOTEKI. Actually, Senator, I do not off the top of my head, and I doubt that any of my colleagues do, either. But we would be happy to submit for the record information on the number of staff-years that we are currently using and funding out of this year that is going in support of our strategic planning activities.

Senator COCHRAN. Thank you for that.

[The information follows:]

GPRA-RELATED COSTS

The Government Performance and Results Act (GPRA) related activities in which the REE agencies have been engaged is built on a sound foundation of previous program planning. And much of the REE mission area GPRA-related activity would have taken place, perhaps in a somewhat different form, even in the absence of GPRA, making it difficult to estimate the marginal costs resulting from the passage of GPRA. For example, ARS's current plan, "The 6 Year implementation Plan 1992 to 1998," is nearing expiration. With or without GPRA, ARS would be devoting resources to develop a new plan covering the next 5 or 6 fiscal years. The REE agencies activities focused specifically on meeting GPRA requirements include management training on GPRA and results-oriented planning and management approaches, preparation of strategic plans and performance plans, and extensive consultation with partners and stakeholders. The costs associated with these activities include staff time, travel expenses, expenses associated with training and stakeholder meetings and some training costs. In fiscal year 1997 the agencies estimate they will spend approximately \$750,000 in GPRA-related activities. Staff years devoted to GPRA activities are estimated to be approximately 7 for the four REE agencies.

Dr. WOTEKI. I might indicate to you, though sir, that my sense is that it has been a very positive experience for all of the agencies

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in helping to more clearly delineate what the future directions are for our research programs, how they interrelate with our commitments for extension education and higher education, and more general information provision to the public and to those who rely very much on our research programs for their livelihoods and their businesses.

It has also helped us to identify the complementarity among the programs. We touched on that issue a bit through the other questions that have been asked this morning.

So my general sense is that whatever expenditures have been put into this planning activity are going to have a long-term payoff. Senator COCHRAN. Thank you.

ARS SMALL FRUITS LABORATORY, POPLARVILLE, MS

One other parochial question I am going to ask is about a facility that ARS maintains at Poplarville, MS, another laboratory which I have visited in the past. I know it is doing research important to the blueberry industry. It is the only small fruit research station in the South, I am told, that is involved in this kind of research. Reports I get from those in the industry and from State officials who have an interest in agriculture activity in our State is that this is important to the future of many small farm industries, small landowners who raise blueberries, blackberries, strawberries, muscadine grapes, vegetables, and other horticulture crops. These producers all benefit from the research done at this facility. So I am putting in a plug for the facility. I hope it is not on anybody's list to close. I do not know that it is, but I hope it is not.

I am curious to know for the record what the funding and staffing is that is proposed for 1998, and the work that is being done there. I would like to just have a special report to bring me up to date on what is occurring there. You may know that off the top of your head.

Dr. KNIPLING. Well, I can give you a very quick overview. We consider that as one of our very important locations. It is a small activity, and different from a lot of ARS activities. We are not addressing a particular problem, but we are trying to exploit an economic opportunity. And as you pointed out, it has had, over the past 10 years, impact on creating new opportunities, new businesses, and so forth.

We have three scientists there, a total staff of about 14. There are no proposed changes for next year. We would continue that activity.

In addition to blueberries, they are also working on other small fruits, strawberries and grapes. The program is capable of doing more. That facility at one point housed a larger number of scientists. It was originally started for tung oil research, but that industry, of course, went with the hurricane back in the 1970's, I believe.

Senator COCHRAN. I am told that that is coming back.

Dr. KNIPLING. Yes; we have heard that, too. There has been some interest in our Poplarville activity to get back in that research. We still maintain some germplasm of the old tung oil plantings there.

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POLYMER SCIENCE CENTER

Senator COCHRAN. And I will tell you why. There is an investment that CSREES made in the Polymer Science Center at the University of Southern Mississippi a few years ago, and in the development of polymers, which you scientists know all about. Chemists know all about it anyway. They have developed a new use for this tung oil that used to be produced and virtually disappeared as a commercial crop or product in our State, but now we understand that it is being encouraged by some of the new products that have been developed as a result of research at that University of Southern Mississippi Polymer Science Center.

You may have something on that, Dr. Robinson. I do not know.

Dr. ROBINSON. I am aware of it, but I do not have anything specific on it. I will be glad to do a review and get you something.

Senator COCHRAN. That is fine. I remember that from a recent visit to that facility too.

Well, I would appreciate having that report, and if there is any additional information the committee ought to have in support of funding for the facility and the staffing of it at current levels or whatever you think appropriate levels are. It would be good for us to have that.

Dr. ROBINSON. We will provide that for the record, some of the information I gave you, plus a little bit more.

[The information follows:]

ARS SMALL FRUITS RESEARCH LABORATORY, POPLARVILLE, MS

Local and regional growers/interests groups have indicated strong support for expansion of the current ARS Poplarville research program on blueberries to include research on other small fruits, vegetables, ornamentals, and new products from tung oil. In order to fully implement new programs in these areas ARS would need to add four new research scientist positions supported by \$1.2 million annually. The current allocation to this laboratory totals \$784,700 which provide support for four research scientists.

COOPERATIVE STATE RESEARCH, EDUCATION, AND EXTENSION SERVICE POLYMER SCIENCE CENTER

The University of Southern Mississippi's Department of Polymer Sciences is one of the top two polymer science programs in America and focuses research on utilizing agricultural materials as feedstocks for new and/or potentially valuable polymer industry products that replace or substitute for those traditionally derived from petroleum. The Polymer Sciences group maintains long-term, high-level interest and expertise in agriculture and, through its significant industrial ties, pursues development and commercialization of products such as foams, adhesives, coatings, elastomers, and high performance thin films.

The Polymer Sciences group is specifically developing new, advanced uses for tung oil, a drying oil used in many coatings such as enamels and varnishes. In particular, tung oil derivatives and polymers have many potential applications in the coatings industry. For example, siliconized tung oil, when used as an additive, provides property enhancements to latex or water borne coatings. Property enhancements can include: improved gloss, improved water resistance, gloss retention, corrosion resistance, better adhesion, and reduced foaming. Working with a national coatings firm, the Polymer Sciences group is confident that this product will become commercially available.

As the commercial viability of new tung oil products has become more opportune, there are also efforts in Mississippi to reestablish tung tree agroforestry. Private companies specializing in vegetable oil products and farmers are starting tung tree plantations and intend to harvest the nuts and extract the oil for use by the coatings industry.

The Polymer Sciences group also works to develop many other industrial products from plant materials. They are completing characterization of Chinese melon oil, an

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oil known to be similar to tung oil. They have been developing novel applications of castor and lesquerella oils for structural foams of interest to the military. In cooperation with a private company, they have explored incorporation of bioactivity from guayule resin in antifoulant paints.

SPECIAL GRANTS FOR INDEPENDENT RESEARCH

Senator COCHRAN. I know there are other facilities around the country, some of which are listed for suggested closing. Dr. Woteki mentioned that. We will review all those requests very carefully.

One thing I also hope that we will review too are special grants that we have made for independent research in a number of different areas. I know in the economic research area, Mr. White may want to comment on this, we do have some special grants that are made. I know of one particular fairly substantial grant for economic research outside the Economic Research Service. My question to you is do you review or use in any way or find helpful research that is being done by any grant recipients that you know about in developing economic analysis under your mission?

Mr. WHITE. Yes, Senator; we do collaborate with universities that get special grants—Iowa State University, University of Missouri. We find that research helpful.

We feel that it is important that we have a role in reviewing requests for grant funding of this type so that we can help to ensure that we do not get duplication of responsibilities assigned to the grant-receiving agencies and ERS. But we think it can be very productive and very complementary to have this kind of funding complement our in-house research.

Senator COCHRAN. Thank you.

AQUACULTURE RESEARCH

I have questions about aquaculture research, too. Senator Bumpers made a point that is very important, about the significance of aquaculture research, and I have a number of questions which I will submit. I know, Dr. Horn, you came to Mississippi, to the facility there, to help at the groundbreaking, to celebrate the development of the National Warmwater Aquaculture Research Center at Stoneville, MS. That was a great day, and we understand that work on that facility is proceeding on schedule. Is that your information, and do you continue to support the efforts and the research that will be undertaken there?

Dr. HORN. That is correct. In fact, I must admit that aquaculture is one of the most rapidly growing interests in our research, education, and economics mission area. The USDA is the leader in aquaculture by any account, and the big picture includes much more than warmwater or even freshwater aquaculture. We are beginning to look at the effects of agriculture on watersheds, on estuaries, and on saltwater fish, as well. We have the Oceanic Institute in Hawaii dealing with shrimp. The Stoneville facility is central to our program and extremely important to our activities, particularly, of course, to catfish disease, genetics, and production research.

Senator COCHRAN. Thank you very much.

We have systems research units in Pine Bluff, AR, and in New Orleans. I have not visited that facility. I ran into somebody from

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the Department of Agriculture that used to be up here in one of these jobs who is now down in the New Orleans facility. And he invited me to come down and look at that, and I think I will.

The Southern Regional Research Center, it is called, in New Orleans.

Dr. HORN. Yes; it may be of interest to you, this is a case where we have brought some of our very fundamental science to bear on a specific problem, and in this case we are using a variety of sophisticated equipment, physicists, and chemists, to look at the nature of off-flavor in catfish. And if this research can deal with both the off-flavor in fish and the algae that seemingly cause it, then the results will be applicable to the catfish industry.

ASSESSING THE CONTRIBUTION OF FUNDAMENTAL RESEARCH

Senator COCHRAN. There may be additional questions along this line dealing with this subject that we will submit for further amplification.

I am also interested in the performance goals. The ARS talks about long-term benefits to agriculture and American citizens as performance goals. I made a talk not too long ago down at Georgia Tech, or at a facility next door to the campus. It was a regional collection of industry, government, academia, talking about how we do a better job of allocating resources for research. And I think they wanted me there to persuade me to do what you all are asking us to do in your budget request, and that is to let you decide where the research dollars are spent rather than our making those decisions. But I do not think we are going to change the mix. We have an interesting mix now that I think works pretty well.

But the point is in this competition between basic research and applied research or goal-driven research, it is really impossible to quantify the practical benefits of basic research. I think Dr. Robinson did a good job of pointing out practical benefits from basic research in agriculture, nematodes and soybeans and other items of evidence, but there are no indicators as to how the agency could determine the contribution from its research. Is it realistic to even expect that?

I know I asked at the Natural Products Center. I said, can you tell me something that you have accomplished? That is a tough question to ask any scientist who is doing basic research, what have you accomplished? Well, I have come to work. I have gotten here on time every day for the whole year.

How is a question like that answered, or should we even ask that question? If we do not ask that question, what question do we ask of the basic research scientists, and why do we spend money on it?

Dr. WOTEKI.

Dr. WOTEKI. Senator, we have been asking ourselves how do we tell you the story of what the investment in the fundamental research buys for this country. And we think we have some indicators that can be used to tell that story.

If you are going to be evaluating fundamental or basic research on an annual basis, I think that the main criteria that is going to have to be used for the work that is done within a relatively short period of time, like a year, is the quality of the science. And in that, we have got mechanisms of peer review where experts come

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in, look at the program, and say this is a quality program or this is an area in which there are other units, other centers, other investigators that we feel are doing better work. So that kind of merit review by peers is going to be something that we are going to use not only for the selection of grant proposals under competitive grants programs for the future, but we are also going to increasingly build into our intramural research programs.

We also have got economic means for doing evaluations of a portfolio of research that look at the return on the investment that is made. But that takes a longer period of time in which to do that type of evaluation. We are planning, under GPRA, to continue to do that type of economic analysis, but it is not going to tell you every year how this program is going to do. It has to be done over a 5- or 10-year period of time.

The other way that I think that we can tell the story about what the benefit of an investment in basic research has been is by essentially tracing a story, to start with a fundamental discovery like the nematode example that Dr. Robinson cited earlier, funded out of the NRI and trace how that is incorporated into agricultural programs and practices.

As part of our annual reporting to the Congress under GPRA, we are going to choose some of those success stories that illustrate how investment in some very basic research does have a long-term payoff. They do not perhaps have a direct payoff. They may have gone down some blind alleys and some side streets; however, they tell how the investments have paid off in some practical applications.

Assessing fundamental research under GPRA is perhaps the hardest task that any Government organization has to do. It is a problem not only facing us within agriculture research, but the other science agencies are facing the same kind of problem. And we have been consulting with each other as we have gone about developing the metrics that we are going to be using, and we are all, I think, going to be putting forward some variations on these same kind of criteria that I have described that we are considering.

FUND FOR RURAL AMERICA

Senator COCHRAN. The Fund for Rural America was mentioned by you in terms of the reduction in funding in the supplemental that the House has approved. The farm bill authorized \$100 million for this fiscal year. You mentioned in your statement that you are allocating \$46 million of that for research, education, and extension activities. I am interested in the research programs that will be funded by those dollars.

You have got \$33 million earmarked for competitive research, and I assume that you are inviting or have invited requests for proposals to be submitted, or you have received proposals for funding. It would be interesting to know what research you have approved and where it is being done and what the research is that is being done under this new program. Could you submit that for the record for us? Or if you know, you can tell us.

Dr. WOTEKI. What we can provide to you at this point is the request for proposals that went out.

Senator COCHRAN. So we have not done anything with it yet.

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Dr. WOTEKI. We have at this point received over 400 proposals for center grants, and we are expecting proposals—the due date is the 28th, next week—for the project proposals. So those center proposals and project proposals will then be reviewed by peer panels; they will be ranked; and the decisions upon awards will be made. It is going to take several months till we get to that point. Then we would be happy to share with you the portfolio of activities.

We will also be involving our Advisory Board in reviewing the relevance of that portfolio of activities to the original intent of the fund for rural America. So we could share with you at this point the overall framework for the program, but it will be several months until we can get you the list of approved projects.

SUSTAINABLE AGRICULTURE

Senator COCHRAN. I am told that the current year's funding level for sustainable agriculture programs is \$8 million. Do you know how that money is being spent?

Dr. WOTEKI. I would like to ask Dr. Robinson to respond to that. I think he also had a comment he wanted to make on the fund for rural America question that you posed.

Senator COCHRAN. OK. Dr. Robinson.

Dr. ROBINSON. Thank you, Senator Cochran.

FUND FOR RURAL AMERICA

The Fund for Rural America RFP, which is out and the proposals are due back in the last of this month, did have three major areas in it that I thought might address to some extent your question. Proposals were solicited under three broad areas. One is international competitiveness, profitability, and efficiency. So there are a whole array of proposals that could come from an extension point of view, a research point of view, some combination of those, and problem-solving approaches were encouraged under the fund.

The second broad area is environmental stewardship, which covers the broad array of activities that interface between agricultural production and the environment in the natural resource base.

The third broad array of proposals were under the heading of rural community enhancement, which covered a number of activities dealing with rural economic development and social development that are part of the overall purpose of the fund. But they do address and repeat Dr. Woteki's point, which is something that the fund very specifically has as part of its mechanisms, a review for relevance by the National Advisory Board, and that is one of the additional elements, I think, that is involved with the proposition of trying to assess the benefits from investments in research. In addition to having peer review to ensure good science, it is a way to ensure that the scientists are considering what the industries or interest groups think are some of the most significant problems.

SUSTAINABLE AGRICULTURE

With regard to the sustainable agricultural research program, these projects or this program is actually conducted through regional sustainability consortia. These consortia of universities consider both scientists and producers when reviewed proposals that

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are submitted for funding under the sustainable agriculture program. Funds are competitively awarded as well as allocation to various regions for projects in sustainable agriculture research and education.

But one of the interesting and I think innovative factors in this particular program, and it is in part also harking back to the IPM question you asked earlier, and the distribution of some of the competitive funds, is that farmers or producers are participating in the early panels to look at the relevance of the proposals that are being submitted for funding for sustainable agriculture.

Just as an example of some of the output, a project in New York has helped farmers use rotations to boost corn profits by \$30 to \$115 an acre, while at the same time protecting the environment. And we have, from each of these regions, and I will be most happy to provide your office a copy of an annual report of the types of projects, the types of investments of these funds, and the results of those projects.

RANGELAND RESEARCH

Senator COCHRAN. I appreciate that very much.

There is another area, and this is going to get Senator Burns' attention, I think. But I noticed that the funding for rangeland research is proposed to be terminated or sharply reduced in this budget request. This concerns me because this is one of the biggest industries in the country. We were talking about how the aquaculture industry is growing. Well, beef cattle and related industries, dairy as well, are huge in terms of total dollar volume in our economy. I wonder why we see these proposals to cut back this area of research. Do we already know all we need to know about grasses and nutritional values and the economics of range management?

Dr. ROBINSON. No, sir; we do not know all we need to know in those areas. In keeping with the effort to increase the budget in some areas that were believed critical, and still maintain a budget that did not show so much exposure for deficit reduction purposes, the President's budget contains both some increases and some decreases. Rangeland research was one of the areas that could be part of the National Research Initiative, under the environmental component of the national research initiative, as well as under the plant component. In addition, the formula funds that are allocated to universities can also be allocated to rangeland research.

So it is certainly not a matter of suggesting that we know all that we should in those areas, but rather it is a matter of trying to set some priorities.

Senator COCHRAN. In the Economic Research Service area, I notice that there are some increases. I had that part of the original statement identified, but I do not see it now. Did I read that right, there is an increase in total number of researchers? How is the money being spent?

Mr. WHITE. There are three components, to the increase. One part would cover approximately 50 percent of the increase in salary costs to the agency for the year. The second component has to do with our participation in a joint effort involving eight of the statistical agencies of the Federal Government in coming up with better

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measures of contribution of our programs to the outcomes that we are seeking. And the third component has to do with improving our data and our ability to analyze that data on the practices adopted on farms. So it would help us to understand better adoption of IPM and other kinds of practices, not only the rate at which they are being adopted, but also why are farmers adopting some practices and not others. We will be looking at profitability as well as demographic and other factors that might affect the adoption of these practices.

Senator COCHRAN. I have been told that we have made some very impressive new discoveries in the use of satellite imaging or aerial photography and measuring in new and innovative ways the need for the application of pesticides or herbicides in production agriculture. You can isolate different areas in a plot of land that you may have planted to soybeans, for example, and identify that only a small portion of that may require an application of chemical sprays or whatever is being used. Is this something that is being advertised or extended to those who are in production agriculture, either through the Extension Service or the Economic Research Service, by data and reports, and how could this affect the profitability of a farmer's operation if he or she is able to utilize these new technologies? Dr. Woteki.

PRECISION AGRICULTURE

Dr. WOTEKI. Senator, I might start this off. There are many applications of remote sensing in agriculture. There is a lot of enthusiasm about what is called precision agriculture, and we have an active research program ongoing within the Agricultural Research Service that specifically focuses on remote sensing applications in production agriculture. There are some successes to talk about, and Dr. Knipling can identify those.

We also support university-based researchers, both through the formula funds and through the competitive grants programs, and Dr. Robinson can point out some of the successes in that area.

We also, within the National Agricultural Statistics Service, have been relying increasingly on satellite-generated images as the basis for the statistical sampling that NASS undertakes in its surveys. So we have a third application in that area, and among those, which one would you like to start with for more information?

Senator COCHRAN. Well, I am familiar with the work that is being done. I am just interested, from an economic standpoint, in whether the USDA agencies are involved in that too.

Mr. WHITE. Thank you.

We have done some preliminary analysis of precision agriculture. One of the difficulties that we have in analyzing precision agriculture is that it is a very microapplication of remote sensing. It really improves the ability to get correct applications of nutrients in very small geographic areas. Therefore, it is the kind of analysis that has to be done on parts of a field, and it is very difficult to generalize to the overall profitability of the program. But we are following that trend, and we will undertake research activities to look at the aggregate implications of precision agriculture when data are available.

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Senator COCHRAN. That is one of the reasons for my question. These things sometimes look good, sound good; they are exciting; they do great in a presentation when you put up charts to talk about everything. Then, you find out it costs five times as much to generate these charts and everything as it does the money that you save in utilizing the research or trying to put it to some practical use. That is why I asked the economics guy, because I think that is what you all are for, is it not? In part, you try to help production agriculture figure out ways to translate economic theory into practical uses. Or am I missing something?

Mr. WHITE. You are absolutely right, Senator.

CENSUS OF AGRICULTURE

Senator COCHRAN. There is another question I wanted to ask, too. You mentioned the National Agricultural Statistics Service, and I wanted Mr. Bay to know that I was not going to leave him out. I am going to ask him something.

I am curious to know about the new undertaking that has been shifted from the Department of Commerce to the Department of Agriculture to conduct the census of agriculture. There has been the suggestion that legislation may be needed to clarify the authorities of the Department of Agriculture to proceed in this area. Is that really necessary, or is that just something that the lawyers tell you you would like to have if you could? Can we get along without having legislative changes?

You have asked for some additional money to do this. If we do not get the legislative changes, can we take the money back? [Laughter.]

Mr. BAY. Mr. Chairman, thank you. I guess I would like to answer the last part of that question first. No. [Laughter.]

If we want to have the census of Agriculture conducted, we would need the resources to do that.

The first part of the question was regarding the legislation. The legislation is needed, and it is not to satisfy just what the lawyers say we have to have. We do have to have the authority in the Department of Agriculture. It is just a matter of shifting the authority that is now in the Department of Commerce Census Bureau to Agriculture, which is the same legislation that authorized it in the Department of Commerce, and that gives us the authority to collect the data.

It is on a mandatory basis, and without that legislation we do not have that authority. And if you do not have that authority, the costs for doing the census go sky high on a voluntary basis, and the coverage of the census is not as good, and therefore the quality of the data is compromised.

We had to go ahead and print the questionnaires, and we have printed them on the assumption that we would have the authority. So we really need the authority of the legislation.

Senator COCHRAN. Thank you very much.

Senator Burns, and then Senator Gorton.

Senator BURNS. I have got a couple. Refresh my memory. Why did the Commerce Department want to move the census part over to the Agriculture Department?

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Mr. BAY. Well, the Census Bureau went through strategic planning, like we all are, and agriculture was one of the lower priority items in their prioritizing of programs. And the Department of Agriculture was supportive of the continuation of the census of agriculture, and therefore it seemed appropriate that since we had the interest in it that it should be transferred to the Department of Agriculture.

Also, there is a savings you will notice in my budget for fiscal year 1998 of \$1 million because of the duplication that existed between what the Department of Commerce did and what the Department of Agriculture did in the way of surveying farmers, and there was a feeling that this was an opportunity to bring together two programs that overlapped.

Senator BURNS. Well, the money that the Commerce Department used to spend on agriculture, did it come with the program?

Mr. BAY. That is a committee problem. [Laughter.]

Senator BURNS. It sounds like one of yours, too, is getting the money. You know, it always just unravels my mind whenever we say the Commerce Department had such a low priority on agriculture. It is the largest contributor to the GDP in this country, and they say they represent the commerce of this country. And I just find that very, very strange, and I agree with what they did and I think you ought to be doing it.

I just have an overall—I am excited about the range management, too, and range research. I will tell you right now that I do not disagree with the science and the research that we do in agriculture, and maybe you do not get enough money. I will argue with you sometimes on priorities, but not the necessity of it. And right now I am saying that we have got some areas that we have to do a lot more work.

I have a daughter that told me the other night in a conversation, says you can talk about all this other stuff that we do on nutrition. If you want to tell your story about research, look at the American people and compare them to any other people in the world. They live longer, buy better food, more nutritional—that is the result of agriculture research. You cannot get specific about it, but just look at us. We live longer than anybody else in the world.

Now, the medical community can only claim a very small part for the increase of longevity and our lifetime in this country since World War II. Did you know that? Do you know what the rest of it is contributed to? How we handle our water. More life-threatening and life-shortening diseases are waterborne than any other way.

Dr. WOTEKI. Well, it is actually three factors, Mr. Burns. One is sanitation, as you pointed out; one is a health-promoting, easily accessible, affordable food supply; the third component is the decrease in childhood deaths through better prenatal and immediate postnatal care, and vaccination of children. That is the health component that has helped.

Senator BURNS. But that has not had any impact like it has on how we handle our water, ground water.

Now, I think Dr. Horn and some of this thing, we have got to take a look at nonpoint-source solution and agriculture's role in that. That will require research as far as irrigated farming, every-

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thing that we do in the handling of our water. I think that is our most important challenge that is in front of us. We can talk about all this other stuff, and I understand that when I came to town I wanted more dollars to control noxious weeds. I found out in this town that you cannot go to the gray poupon and white wine parties and talk about weeds because pretty soon you are standing there talking all by yourself, because they are not a high priority in this town, is weeds.

But to us in agriculture who understand agriculture they are damned important. So what I am saying is that you folks should be congratulated on the science that you have done, that you are doing. Maybe we are going to have to change our focus a little more, because water is pretty important, how we handle it, to Senator Cochran's State and aquaculture, because that all goes hand in hand. It is the very basic of things that we do.

And I also want to remind you that we do well in garnering Nobel Prizes for science, both in agriculture and over in other areas, too. But somebody else gets our market. So that tells me we had better be doing some research on how to sell the darn stuff. We had better get a better trader whenever we go in dickering for these international agreements on trade. We had better have a better cow trader up there than we have had in the last 10 or 15 years, because I will tell you, they have dickered away all of our market out there, and that is where we had better get sharp.

So do not be afraid to say, whenever somebody asks you on our research, do not be afraid to say let us just look at America and compare it to any other nation in the world, and I think you have got a great story to tell, and I know you can tell it.

So congratulations, and before it is all over I will have some questions I want to submit, and before it is all over I want to talk very seriously about our priorities where we should be doing most of our research.

And thank you very much for coming today. I was very much interested in your questions.

Senator COCHRAN. Thank you, Senator.

Senator Gorton.

Senator GORTON. Thank you, Mr. Chairman.

I have for you, Dr. Woteki, and perhaps for Dr. Knipling, a couple of rather parochial questions. We were startled, to say the least, to see that the President's budget was going to close down a more than 40-year history of cooperative research with Washington State University at Pullman, and I would like to hear your justification for doing so. Excuse me, not Pullman, but Prosser.

PROPOSED CLOSURE OF PROSSER

Dr. WOTEKI. Yes; you threw me for a loop there for a minute because I expected you to say Prosser.

We have had a very difficult budget year this year and had to make some very difficult decisions about priorities. Within the Agricultural Research Service, as you know, there are over 100 research laboratories, and there are multiple projects within those laboratories.

When we were planning our 1998 budget request we had a number of new initiatives. They involve either emerging problems or

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major new areas of research that we wanted to accommodate and be able to address within the Agricultural Research Service, things like food safety, emerging diseases that affect both crops and livestock. Within ARS we also wanted to be able to address some of the grazinglands research issues that Senator Burns has been asking about, as well as integrated pest management biocontrols and human nutrition research as major new emphases or increasing emphases within ARS.

We had a process that we used to rank all of the projects within the Agricultural Research Service that related to their relevance to the mission and the priorities of the agency, the capacity of the agency to continue that research, and the overall impact, the effect on American agriculture. The senior staff within the Agricultural Research Service reviewed all of the projects against those criteria, and then ranked them. On the basis of that ranking the lowest ranked projects were identified as being ones for either major reduction or elimination, and then based on that project ranking we looked at which facilities had most of their projects ranking in this lowest quartile.

In that ranking there were 71 projects that were found to be in that lowest tier, and on the basis, then, of that programmatic and quality, essentially, review, we made the decision to close the Prosser facility.

Senator GORTON. And the Mandan facility falls into the same category?

Dr. WOTEKI. And the Mandan facility, as well.

Senator GORTON. Are those rankings and the facts and judgments that went into them available to the committee?

Dr. WOTEKI. We can make available to you information about the process that was used, as well as the overall rankings.

Senator GORTON. I would greatly appreciate your doing so. We understand that those projects that you propose to transfer both the Washington State University and to Idaho, that the facilities to which you propose to transfer them have no room for the people or for the projects without a capital investment in new facilities. Was that considered?

Dr. WOTEKI. I am not aware of that discussion. I am going to ask Dr. Knipling to respond.

Dr. KNIPLING. The Prosser laboratory has seven research projects. Three of those are proposed for retention, while four are proposed for termination. One of the projects proposed for retention is really part of our minor uses pesticide evaluation activity, which would come back to headquarters for reallocation to other locations where we do that type of work.

The two projects that you are probably speaking of is the potato project which is proposed to go to Aberdeen, ID. This is not an issue of space. We do recognize, however, in retrospect that there was an oversight. Some of that work is dealing with potato virus-free certification. We are going to have to decide on an alternative location, probably Corvallis, OR, where we have a similar activity, or perhaps in the State of Washington at our Yakima laboratory. So it is not a matter of space at Aberdeen, but rather this virus-free certification issue.

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The pea and lentil project at Prosser is scheduled to be moved intact as it is now to Pullman, where we have similar work. That was one of our original objectives, to consolidate similar work so as to get more of a critical mass of scientists working on the problem. We are aware that there are some space limitations there at the university. We are exploring several options which would not involve significant capital investment, such as utilizing some temporary space or perhaps even a rental space from a private source.

We really do not consider that as an overwhelming limitation to the movement of the pea and lentil project to Pullman.

Senator GORTON. Thank you. Thank you both for your answers. I would appreciate as much background information on the way in which these priority determinations have been made as you have available so that I and we can determine whether or not we agree.

Thank you, Mr. Chairman.

Senator COCHRAN. Thank you, Senator.

[The information follows:]

PROJECT EVALUATION PROCESS

All research projects in the ARS portfolio were evaluated by the Agency's senior management team using the ARS Project Evaluation Guide. A copy of the Guide is available. There are three primary factors in the evaluation process. These are: I Relevance, II Capacity, III Impact. A careful analysis of the Federal role is also conducted. Relevance deals with the nature, scope, and characteristics of a project. Capacity deals with the resource capability and capacity of a project to meet the stated objectives. Impact is concerned with the changes that have or are anticipated to occur as a result of the impact of ARS research on the scientific community, the Nation's economy, society, and on policy issues of the Nation. Possible scores for each of the three factors range from a low of 2 to a high of 14 in 2-point increments, so that the maximum consensus score possible for any one project would be 14×3 or 42.

The purpose of these ratings was to develop an initial grouping of projects for further consideration. Those projects that fell into the lower quartile were the ones that were further scrutinized. These ratings represented the first step in the overall decisionmaking process to guide further discussions of the ARS senior management team, and therefore were not retained. In reconstructing the process, I recall the consensus scores for all the Agency's projects evaluated as part of the fiscal year 1998 budget process ranged from a low of 6 to a high of 38. Over 90 percent of the Agency's projects received scores in excess of 22. All of the 71 projects proposed for termination and reallocation in the fiscal year 1998 budget scored in the range of 6 to 22. In regard specifically to the Prosser location, the four projects proposed for termination scored in the range of 16 to 20. Because termination of those projects would jeopardize the capacity of the remaining three projects to support the Prosser facility, the decision was made to move the remaining projects to other locations. Specifically, the pea and lentil project will be relocated to the Pullman location and the potato project will likely be relocated to Aberdeen, Idaho or Corvallis, Oregon.

We are aware that there are no "good" ways to close ARS laboratories. However, it is important to note that earlier attempts to close facilities resulted in the identification of resources as cost savings and resulted in the loss of funds to the Agency. Under the current budget, funds are retained by the Agency and redirected to high priority research. In many instances, ARS utilizes the same scientists to carry out the newly proposed research at other nearby facilities.

SUBMITTED QUESTIONS

Senator COCHRAN. I appreciate very much the attendance and cooperation of all of our witnesses, and for your testimony. Additional questions will be submitted in writing, and we hope you will be able to respond to them in a timely fashion.

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[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

AGRICULTURAL RESEARCH SERVICE

QUESTIONS SUBMITTED BY SENATOR COCHRAN

LOCATION CLOSURES

Question. Please update the status of ARS laboratories closed in fiscal year 1995 and fiscal year 1996? Have these locations been turned over to GSA for disposal? Describe the disposition of these facilities.

Answer. Of the ten (10) ARS locations closed in fiscal year 1995, all disposal actions have been completed at eight (8) of these sites. These eight locations and the new owners of the land and buildings, where appropriate, are as follows: Delaware, OH, buildings transferred to USDA, Forest Service; Fairbanks, AK, (No federally owned land or buildings involved); Georgetown, DE, buildings transferred to the Department of Education for use by the University of Delaware; Lewisburg, TN, land and buildings transferred to the University of Tennessee; Lexington, KY, (No Federally-owned land or buildings involved); Oxford, NC, land and buildings transferred to USDA, Animal and Plant Health Inspection Services; Suffolk, VA, buildings transferred to the Department of Education for use by Virginia Polytechnic Institute and State University; Rotterdam the Netherlands (No federally owned land or buildings involved).

The land and facilities at Pasadena, CA, have been reported to GSA for disposal. The facilities at Savannah, GA, will be reported upon completion of environmental cleanup activities.

In fiscal year 1996, the facilities at three ARS locations were identified for transfer to non-federal entities. The land and buildings at two (2) locations have been reported to GSA for disposition. In fiscal year 1997, Houma, LA, will be transferred to the American Sugar Cane League Foundation and Brawley, CA, will be transferred to Imperial County, CA. The transfer of the facilities at Brownwood, TX, is on hold pending continuing negotiations with Texas A&M.

Question. What is the status of the closures at Bozeman, Montana and Durant, Oklahoma?

Answer. Bozeman, Montana-Research programs and personnel have been transferred to Sidney, Montana. All ARS-owned buildings, with the exception of three greenhouses, were offered to the University of Montana. The greenhouses are being used by USDA, Forest Service through September 20, 1997, then will be demolished by ARS. Durant, Oklahoma, research programs and personnel have been transferred to El Reno, Oklahoma. Completion of the real property disposal is pending resolution of environmental issues.

LOCATION CLOSURES

Question. What criteria was used to decide closure of ARS locations at Mandan, North Dakota and Prosser, Washington?

Answer. The criteria imposed included relevance, capacity, and impact. A careful analysis of the Federal role was also conducted. Relevance deals with the nature, scope, and characteristics of research projects being carried out. Capacity deals with the resource capability and capacity of the laboratory to meet the stated objective(s). Impact is concerned with the change(s) that have or are anticipated to occur as a result of the impact of ARS research on the scientific community, the Nation's economy, on society, and on policy issues of the Nation.

Question. How many people and scientists would be impacted by the closure of Prosser, Washington; Mandan, North Dakota; Orono, Maine; and Brawley, California? What are the operating costs for these laboratories?

Answer. The number of people and scientists impacted by closures and the operating costs for these laboratories are provided below.

Location/worksites*	Number of—		Fiscal year 1997 operating costs
	People	Scientists	
Prosser, Washington	137	8	¹ \$2,721,500
Mandan, North Dakota	238	9	² 2,886,300
Orono, Maine*	6	1	135,500

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Location/worksites*	Number of—		Fiscal year 1997 operating costs
	People	Scientists	
Brawley, California*	8	1	321,000

¹ Includes 4 scientists and \$1,284,800 proposed for redirection as follows: Pullman, WA 2 scientists/\$550,000; Headquarters \$88,600; and Aberdeen, ID 2 scientists/\$646,200.

² Includes 2 scientists and \$551,100 proposed for redirection to Miles City, MT.

REQUESTED INCREASES FOR FISCAL YEAR 1998

Question. ARS is proposing to finance most of its proposed increases through reductions of current research. Did the Agency recommend this approach or was this a department or OMB decision?

Answer. Decisions on reductions/termination of all projects are based on agency assessments and recommendations that are subsequently reviewed at the Department level and at OMB. The decisions on funding levels and targets were made at the Department and OMB levels in response to the need to balance competing agriculture priorities for limited resources and to identify savings from existing resources as a means of carrying out increased research needs to address high priority emerging research issues.

Question. Provide for the record, agency, department and OMB recommendations for the 1998 budget.

Answer. The ARS budget recommendations for the 1998 budget will be provided for the record.

FISCAL YEAR 1998 APPROPRIATION HISTORY

Item	Agency estimate	Department estimate	President's budget
Base Level ¹	\$728,853,000	\$716,826,000	\$716,797,000
PROGRAM INCREASES			
Animal Sciences	15,000,000	3,800,000	.....
Food Safety	10,000,000	5,000,000	4,114,000
Emerging Diseases/Exotic Pests	15,000,000	9,374,000	5,000,000
Grazinglands	11,000,000	1,700,000	1,000,000
Genetic Resources	6,000,000	3,900,000	2,000,000
IPM/Biocontrol	15,000,000	5,700,000	4,000,000
NAL	4,000,000	2,000,000	.....
Aquaculture	8,000,000	.....	.....
Floral/Nursery Crops	2,000,000	.....	.....
Lower Delta Initiative	4,000,000	.....	.....
Everglades Initiative .....	.....	.....	2,000,000
Human Nutrition .....	.....	.....	12,000,000
Subtotal, Program Increases	90,000,000	31,474,000	30,114,000
OTHER INCREASES			
Pay Costs (3 percent)	17,021,000	6,409,000	6,409,000
Increased Operating Costs	8,314,000	.....	.....
Increased CSRS Costs (1.51 percent)	2,767,000	.....	.....
Subtotal, Other Increases	28,102,000	6,409,000	6,409,000
DECREASES			
General Reductions/Termination of Less-Critical Projects/Admin. O/H .....	.....	- 8,023,000	- 23,023,000
Streamline Reductions in Staff-Years	- 3,553,000	- 3,500,000	- 3,500,000
Subtotal, Decreases	- 3,553,000	- 11,523,000	- 26,523,000
Total	114,549,000	26,360,000	10,000,000
Total, ARS	843,402,000	743,186,000	726,797,000
Buildings and Facilities			
Beltsville Agricultural Research Center, Beltsville, MD (Modernization)	20,000,000	3,200,000	3,200,000

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FISCAL YEAR 1998 APPROPRIATION HISTORY—Continued

Item	Agency estimate	Department estimate	President's budget
ARS Regional Research Centers:			
Philadelphia, PA	5,200,000	5,200,000	5,200,000
New Orleans, LA	1,100,000	1,100,000	1,100,000
Peoria, IL	8,000,000	8,000,000	8,000,000
(Modernization)	14,300,000	14,300,000	14,300,000
Plum Island Animal Disease Center, Greenport, NY (Modernization)	8,400,000	5,000,000	5,000,000
U.S. Horticultural Crops and Water Management Research Laboratory, Parlier, CA (Construction)	23,400,000	23,400,000	23,400,000
Western Human Nutrition Research Center, Davis, CA (Planning/Design)	3,200,000	3,200,000	.....
National Agricultural Library, Beltsville, MD (Modernization)	6,000,000	6,000,000	6,000,000
European Biological Control Laboratory, Montpellier, France (Construction)	3,800,000	3,400,000	3,400,000
Subtropical Agricultural Research Laboratory, Weslaco, TX (Modernization)	4,600,000	.....	.....
U.S. Grain Marketing and Research Laboratory, Manhattan, KS (Modernization)	2,250,000	.....	.....
Quarantine Facility, Ft. Lauderdale, FL (Construction) .....	.....	.....	4,000,000
Entomological Laboratories, Gainesville, FL (Construction)	6,200,000	.....	.....
U.S. Vegetable Laboratory, Charleston, SC (Planning/Design/Construction)	7,630,000	.....	.....
National Coldwater Aquaculture Research Center, Leetown, WV (Construction)	4,000,000	.....	.....
National Animal Disease Center, Ames, IA (Modernization)	8,400,000	.....	.....
Southeast Poultry Research Laboratory, Athens, GA (Construction)	5,100,000	.....	.....
Plant and Natural Resources Laboratory, Maricopa, AZ (Planning and Design)	5,500,000	.....	.....
North Central Soil Conservation Research Laboratory, Morris, MN (Construction)	3,800,000	.....	.....
Rearing and Genetics Laboratory, Waimanalo and Tropical Fruits and Vegetables Laboratory, Hilo, HI (Planning/Design)	1,750,000	.....	.....
Plant Physiology and Genetics Research Laboratory, Urbana, IL (Planning/Design/Construction)	1,800,000	.....	.....
Avian Disease and Oncology Laboratory, East Lansing, MI (Design)	1,900,000	.....	.....
Sugar Beet, Bean and Cereal Research Laboratory, East Lansing, MI (Planning/Design/Construction)	870,000	.....	.....
Insect Rearing Facility, Stoneville, MS (Planning/Design)	1,000,000	.....	.....
Energy Audits of ARS Facilities (Planning)	2,000,000	.....	.....
Inventory of CFC Chillers (Planning)	2,000,000	.....	.....
Seismic Studies of ARS Facilities (Planning)	1,000,000	.....	.....
Total	138,900,000	58,500,000	59,300,000

¹For the agency estimate, the base was the fiscal year 1997 President's budget. For Department Estimate, the base was the fiscal year 1997 Appropriations, and for the President's budget, the base was adjusted fiscal year 1997 appropriations.

Question. Provide for each of the requested increases, how and where the new funding will be allotted.

Answer. The new funding proposed will be allotted as follows:

EMERGING DISEASES AND EXOTIC PESTS—\$5,000,000

Emerging Plant Diseases—\$2,500,000

Frederick, \$900,000.—Develop improved techniques for karnal bunt pathogen detection, identification, and characterization; develop methods to decontaminate infested commodities, equipment, and handling facilities; and characterize factor affecting host-pathogen interactions.

Aberdeen, \$300,000.—Develop system for evaluating germplasm for resistance to karnal bunt, and establish program for systematic screening of new and existing crop varieties for resistance.

St. Paul, \$500,000.—Characterize karnal bunt disease and wheat scab epidemiology and fungal ecology, including factors affecting disease establishment and potential points of control.

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Manhattan, \$500,000.—Improve resistance of wheat varieties to karnal bunt by developing and utilizing genetic methods for incorporating disease resistance from related and unrelated species.

Albany, \$300,000.—Improve the genetic resistance of wheat varieties to karnal bunt by determining the number and map position of resistance genes; describing the regulation of resistance gene expression; and determining the mechanisms operating in resistant hosts.

Emerging Exotic Diseases of Livestock—\$1,100,000

Ames, \$500,000.—Develop diagnostic tests to detect Transmissible Spongiform Encephalopathies in live animals, i.e. Scrapies, Chronic Wasting Disease of Cervids, and Bovine Spongiform Encephalopathy-like Encephalopathies.

Athens, \$300,000.—Develop novel genetic vaccines and immune modulatory strategies to prevent outbreaks of exotic poultry diseases such as highly pathogenic Avian Influenza and velogenic Newcastle Disease.

Greenport, \$300,000.—Develop diagnostic tests and vaccines for emerging foreign animal diseases of livestock such as Foot and Mouth disease and African Swine Fever.

Emerging Domestic and Zoonotic Diseases of Livestock—\$1,400,000

Ames, \$400,000.—Develop methods to control porcine reproductive and respiratory syndrome (PRRS), an emerging disease problem for the swine industry.

Ames, \$300,000.—Develop a vaccine for a newly recognized variant of Bovine Viral Diarrhea.

Ames, \$400,000.—Improve diagnostic tests for the detection of Johne's disease and investigate the role of genetic resistance in this disease which has recently been suggested to be associated with Crohn's disease in human beings.

Beltsville, \$300,000.—Identify animal reservoirs, life-cycle, and intervention methods for newly recognized microsporidial protozoan parasites (*Cryptosporidium* and *Cyclospora*) both animals and people.

INTEGRATED AND AREAWIDE PEST MANAGEMENT—\$4,000,000

Area-wide IPM and Pilot-test Programs—\$1,000,000

Headquarters, \$1,000,000.—Conduct scale-up pest management pilot tests in support of the ARS Area-wide program and the USDA IPM Initiative.

Augmentative and Biologically-based IPM in Field, Horticultural and Vegetable Crops—\$2,000,000

Stoneville, \$600,000.—Develop mechanical and process engineering procedures for diet handling and mass propagation of insect and weed natural enemies, with emphasis on pests such as boll weevil, *Heliothis*, and leafy spurge.

Orlando, \$600,000.—Develop biological control and other biorational technologies for control of silverleaf whitefly, Egyptian mealybug, Thrips palmi, brown citrus aphid, and other emerging pests of horticultural and nursery crops in the Southeast U.S.

Beltsville, \$300,000.—Develop semiochemical-based IPM suppression systems for Colorado potato beetle and other insect pests of field and vegetable crops.

Gainesville, \$250,000.—Improve diets for mass rearing of parasites and predators for augmentation biological control of the diamondback moth, sweetpotato whitefly, and other vegetable pests.

Weslaco, \$250,000.—Develop IPM technologies for control of aphids, beet armyworm, and other secondary pests that limit cotton production during boll weevil suppression and eradication programs.

Host-Plant Resistance and Pest Management Strategies—\$1,000,000

Stoneville, \$400,000.—Develop and evaluate management strategies for resistance of corn earworm and tobacco budworm to *Bt* in cotton, and to new transgenic crop resistance factors that may be introduced.

Ames, \$300,000.—Develop integrated management strategies for control of corn insect pests, emphasizing management of resistance of the European corn borer to *Bt* and to new transgenic crop resistance factors that may be introduced.

Raleigh, \$300,000.—Develop host-plant resistance strategies for the management of pathogens in southeastern small grain production systems.

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GRAZINGLANDS THRUST, UTILIZATION AND CONSERVATION—\$1,000,000

Systems to Optimize Production & Resource Improvement—\$1,000,000

El Reno, \$400,000.—Determine impact of pasture design and grazing animals on quality of water emerging from watersheds, and develop pasture management systems that will optimize water quality and productivity in the semi-arid U.S.

Las Cruces, \$300,000.—Develop low-input technology for seeding native grasses and shrubs on rangelands and riparian areas after control of introduced weeds.

University Park, \$300,000.—Determine impact of pasture design and grazing animals and grazing animals on quality of water emerging from watersheds and develop pasture management systems that will optimize water quality and productivity in the humid U.S.

FOOD SAFETY—PREHARVEST AND POSTHARVEST—\$4,114,000

Food Safety—Preharvest—\$1,614,000

Ames, \$300,000.—Monitor *Salmonella* isolates from cattle and swine for S. Typhimurium DT104 and characterize the epidemiology, transmission and nature of antibiotic resistance of the organism.

Clay Center, \$500,000.—Correlate production practices for cattle and swine with post processing contamination of food products.

College Station, \$500,000.—Develop competitive colonization systems, as have been successfully accomplished for broilers, to prevent *Salmonella* and E. Coli 0157:H7 in swine and cattle.

Athens, \$314,000.—Delineate the dynamics of campylobacter transmission in production in order to identify control points and strategies to limit contamination in poultry.

Food Safety—Postharvest—\$2,500,000

Wyndmoor, \$400,000.—Develop quantitative data on food pathogen inactivation and survival needed to evaluate adequacy of processing and process controls in the production of meat and poultry products and validate risk assessment.

Wyndmoor, \$300,000.—Develop pasteurization requirements for the thermal destruction of *Listeria monocytogenes*, *Salmonella* spp., and other pathogens in commercially produced egg product blends containing non-egg products.

Beltsville, \$300,000.—Develop advanced inspection methods utilizing machine vision and electronic databases to increase the thoroughness and rapidity of individual carcass inspection.

Athens, \$600,000.—Develop the necessary detection and enumeration methods and delineate the dynamics of pathogen transmission in order to identify control points and strategies to prevent spread of campylobacter in poultry.

Wyndmoor, \$300,000.—Evaluate and optimize various intervention technologies for use solely, and in combination, to reduce pathogens in food products of plant origin while retaining their fresh appearance and high consumer acceptance.

Albany, \$300,000.—Evaluate and optimize various intervention technologies for use solely, and in combination, to reduce pathogens in food products of plant origin while retaining their fresh appearance and high consumer acceptance.

Pullman, \$300,000.—Prevent production of vomitoxin (DON) in wheat and barley by developing control strategies utilizing bioengineering to enhance natural resistance in crops.

GENETIC RESOURCES—\$2,000,000

Preservation of Plant and Microbial Genetic Resources—\$2,000,000

Ft. Collins, \$500,000.—Preservation and methodologies for plant germplasm.

Beltsville, \$400,000.—Research in quarantine, databases, and ecogeographic studies of plants.

Fresno/Parlier, \$400,000.—Regeneration of plant germplasm for the National Plant Germplasm System (NPGS).

Ft. Collins, \$500,000.—Preservation of base collection of microbial germplasm.

Hilo, \$50,000.—Support for Clonal Repository.

Riverside, \$50,000.—Support for Clonal Repository.

Davis, \$50,000.—Support for Clonal Repository.

Corvallis, \$50,000.—Support for Clonal Repository.

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HUMAN NUTRITION—\$12,000,000

Survey—\$6,000,000

Headquarters, \$6,000,000.—Survey with EPA, DHHS on food consumption patterns of infants and children.

Dietary Research—\$6,000,000

Beltsville, \$1,000,000.—Support Human Nutrition Initiative.

Boston, \$1,000,000.—Support Human Nutrition Initiative.

San Francisco, \$1,000,000.—Support Human Nutrition Initiative.

Grand Forks, \$1,000,000.—Support Human Nutrition Initiative.

Houston, \$1,000,000.—Support Human Nutrition Initiative.

Little Rock, \$1,000,000.—Support Human Nutrition Initiative.

SOUTH FLORIDA ECOSYSTEM RESTORATION—\$2,000,000

Sustainable Agricultural Production Systems of Sugarcane and Other Crops in South Florida—\$1,000,000

Canal Point, FL, \$1,000,000.—Identify sugarcane germplasm aimed at improving sugarcane tolerance to high water tables and determine agronomic practices that control soil subsidence without reducing yield; evaluate water quality and quantity effects from producing sugarcane and other crops under high water table conditions; and develop hydrologic models that evaluate the operation of agricultural water management control systems in south Florida.

Biological Control of Melaleuca and Other Exotic Plant Species of Consequences to Agriculture and the Everglades—\$1,000,000

Ft. Lauderdale, \$1,000,000.—Accelerate research to identify biological agents that control melaleuca and other exotic plant species.

HUMAN NUTRITION RESEARCH

The largest increase proposed is for Human Nutrition research. Half the money is to fund a survey of food consumption by infants and children to be used by EPA to assess dietary exposures and the other half to support research at ARS' six nutrition centers.

Question. Is the survey of food consumption mandated by law?

Answer. The Food Quality Protection Act of 1996 (FQPA) requires the Environmental Protection Agency (EPA) to set regulations on the limits of safe exposure of children to pesticide residues in food based on statistically valid estimates of dietary intakes as obtained from nutrition surveys conducted by the Department of Agriculture and the Department of Health and Human Services. The Department of Agriculture, through the Agricultural Research Service, conducts the Continuing Survey of Food Intakes by Individuals (CSFII) that collects dietary information from respondents of all ages. The current CSFII covers the period 1994 to 1996 and contains data on dietary intakes of approximately 5,700 children. The EPA estimates that data from approximately 10,000 children are needed to predict a safe exposure limit. Thus, a supplemental survey consisting only of children is required to meet the requirements of the EPA in response to the FQPA.

Question. Isn't this the same survey that the Congress eliminated funding for a few years ago because the cost per participant was excessive?

Answer. Prior to the passage of the FQPA, previous requests for a dietary survey of children by the former Human Nutrition Information Service, in response to issues raised by the National Academy of Science in a report raising concerns about pesticide residues in the food of children, were not funded by Congress. The difference between those requests and the current one is the requested survey is a supplemental survey that provides the EPA with a statistically valid number of children in each age group when the data are combined with the funded 1994–1996 Continuing Survey of Food Intakes by Individuals (CSFII) that was just completed.

Question. What is the justification for increasing support for ARS research at its six nutrition centers, particularly when it is coming at the expense of reducing existing agriculture production research?

Answer. The Human Nutrition Research Initiative is intended to enhance the capacity of the six USDA/ARS Human Nutrition Research Centers to complement ongoing research with new research approaches to: (1) define the relationship between diet and the risk of chronic disease; (2) improve resistance to acute infections and immune disorders by investigating the interaction between nutrition and immune function; (3) enhance capacity to promote changes in dietary habits by basic research; (4) improve the scientific basis for more effective Federal food assistance pro-

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grams; (5) extend dietary guidance to nutritionally-vulnerable groups, such as children, within the U.S.; and (6) generate a more nutritious food supply by defining the basis for modifying the health promoting properties of foods and to make beneficial changes in the consumption of foods. The knowledge to be obtained from the initiative will enable ARS to better conduct research related to production agriculture leading to the development of products that meet the demands of consumers for foods that are health promoting and nutritious. A major area of ongoing research is product quality; certainly, for foods and food products, nutritional quality is an area of increasing emphasis. Furthermore, the much needed supplemental dietary intake survey of children will provide the EPA with information upon which sound and responsible regulations concerning the levels of pesticide residues in foods can be developed. It is essential to the agricultural producers and processors that the regulations to be developed are based on accurate dietary intake data so that the regulations protect the best interests of the consuming public and at the same time maintain the competitiveness of American agriculture.

Question. The human nutrition increase is described as the first year of a multi-year initiative. What increases are contemplated in each year of this initiative? Do you expect these increases also to come at the expense of ARS' existing research programs?

Answer. The fiscal year 1998 budget includes a \$12M proposed increase. Follow-up increases of \$6M in fiscal year 1999, \$12M in fiscal year 2000, \$12M in fiscal year 2001 and \$11M in fiscal year 2002 are needed for a total of \$53M for the initiative. It is not expected that the increase will come at the expense of ARS's existing research programs but will come through increases in appropriations.

EMERGING DISEASES

Question. The requested increase for emerging diseases and exotic pests is for both plant and animal diseases and pests. You are not specific as to which disease or pest you will allot these funds. Do you plan to use these funds as flexible or contingency basis or will you allot them permanently? Please explain.

Answer. ARS plans to allot these funds permanently because developing adequate control measures for both plant and animal diseases and pests will require long-term research efforts. The plant diseases included are: Karnal bunt and head blight (scab) of wheat and the animal diseases included are: Transmissible Spongiform Encephalopathies including scrapie, chronic wasting disease and Bovine spongiform encephalopathy or BSE-type encephalopathies, Avian Influenza, and velogenic Newcastle disease, hog cholera, porcine reproduction and respiratory syndrome, Bovine Viral Diarrhea, Johne's disease, and cryptosporidium and cyclospora. Increased attention to these problems now will also serve the very important purpose to increase our scientific capacity and base of expertise to enable us to respond on an emergency basis to other crop and livestock disease problems that may arise in the future.

GERMPLASM

Question. Please identify your resources committed to maintaining plant germplasm repositories. How much is committed to the collection of plant germplasm and how much is committed to evaluation of your germplasm?

Answer. The estimated funding for maintaining the ARS plant germplasm system repositories for fiscal year 1997 is \$20,057,900. Included in this total are: \$3,951,700 for collection activities to include acquisition, quarantine, and taxonomy; and \$16,106,200 for preservation activities, to include germplasm maintenance, characterization, documentation, storage, and distribution.

Evaluation of germplasm is an activity conducted outside of the repositories by breeders and other users of germplasm. ARS commits \$19,625,100 to evaluation activities.

Question. What are the State resources committed to the repositories? Provide a listing of your germplasm repositories.

Answer. State resources committed to the repositories include both direct commitments and in-kind support to Regional Plant Introduction Stations (RPIS) and the Interregional (IR) Potato Station. The direct commitments can be identified and reported more accurately as off-the-top funding from formula funding through the Regional Directors' Associations and direct contributions from the host agricultural experiment stations. Those resources are identified:

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Location/repository	Formula funds	Local funds
Griffin, GA, Southern RPIS	\$234,800	\$350,000
Ames, IA, North Central RPIS	479,000	319,000
Geneva, NY, Northeastern RPIS	142,000	156,000
Pullman, WA, Western RPIS	352,000	250,000
Sturgeon Bay, WI, IR Potato Station	153,500	118,700
Total	1,371,300	1,193,700

A listing of the major ARS germplasm repositories is provided for the record: Davis, CA; Fresno, CA; Riverside, CA; Ft. Collins, CO; Washington, DC; Miami, FL; Griffin, GA; Hilo, HI; Ames, IA; Aberdeen, ID; Urbana, IL; Beltsville, MD; Stoneville, MS; Fargo, ND; Geneva, NY; Corvallis, OR; Mayaguez, PR; College Station, TX; Logan, UT; Pullman, WA; Madison, WI; and Headquarters.

BIOCONTROL

Question. How much is ARS currently allocating to the biocontrol of pests?

Answer. Currently, ARS spends \$53,769,900 on biologically-based pest control technologies which includes research on host plant resistance, classical and augmentative biological control, pheromone mating disruption, sterile insect release, and other related pest control strategies.

Question. What is the justification for the \$3 million increase proposed?

Answer. The proposed increase of \$3 million for biocontrol of pests is part of the \$4 million requested for research in support of the USDA Integrated Pest Management (IPM) initiative and will fund additional research to meet the Department's goal of having 75 percent of the crop acreage under IPM by the year 2000.

Question. The testimony indicates that of the requested increase, \$1 million is to permit ARS to conduct area-wide and pilot test programs on ARS-developed technology ready for large-area demonstrations. What area-wide and pilot test programs are planned?

Answer. Several area-wide pest management programs have already been initiated by ARS in partnership with the State Agricultural Experiment Stations. These programs currently address the corn earworm in the southeast, the codling moth in the pacific west, and corn rootworm in the Midwest United States. Because of the high success of these programs thus far, ARS plans to conduct additional programs in fiscal year 1997 and fiscal year 1998 as a part of the USDA IPM initiative. A peer review panel met on April 28-29, 1997, to evaluate and prioritize eight area-wide proposals that were submitted to the agency in March of 1997. At least one of these proposals will be funded in fiscal year 1997, with up to two additional proposals planned for implementation in fiscal year 1998, if new funding is appropriated. Targets of the eight area-wide pest management candidate programs include leafy spurge, stored grain insects, corn earworm/tobacco budworm, Russian wheat aphid, Colorado potato beetle, boll weevil, silverleaf whitefly, and fruit flies.

Question. What ARS-developed technology will be tested?

Answer. ARS has developed a number of environmentally-friendly pest control technologies that will be tested against one or more of these pests. These technologies include traditional biological control with parasites, predators, and microbial agents; host-plant resistance; behavior-modifying chemicals, such as pheromone mating disruptors and attractants; sterile insect release techniques; and cultural practices.

Question. Where will these demonstrations be carried out and what is the cost of each?

Answer. A final decision as to which program and how many of these programs ARS will be able to implement has yet to be made. Once this final decision is made, then candidate sites for demonstration and the cost of each program will be evaluated. Generally speaking, each of the 5-year area-wide pest management programs cost \$1-2 million per year.

FOOD SAFETY RESEARCH

Question. You are again requesting an increase for food safety research. How much does ARS currently commit for pre- and post-harvest food safety research? How are you assisting FSIS?

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Answer. ARS currently commits \$29,381,200 for pre-harvest and \$20,266,100 for post-harvest food safety research related to the microbiological contamination of meat and poultry products, for a total of \$49,647,300.

The ARS is assisting the Food Safety and Inspection Service (FSIS) by conducting research that (1) provides screening or confirmatory methods for use in FSIS laboratories, such as the development of a screening and confirmatory method for *Campylobacter jejuni*, and a rapid and sensitive PCR molecular biology method for identification of *E. coli* O157:H7, (2) provides information for FSIS use in making regulatory decisions, such as (a) the modeling of bacterial growth or thermal death times to help set standards for processed meat products and (b) the comparison of the use of sponging vs. excision and one vs. three carcass sites for industry process control of cow/bull and hog carcasses and (3) provides and/or evaluates technology which can be approved by FSIS for use in inspected establishments to lower contamination of meat and poultry, such as steam sterilization of beef carcasses.

Question. Please identify the current and proposed funding for pathogen reduction research. Where is this research carried out? What is the nature of this research?

Answer. Current funding for pathogen reduction research is \$24,952,100. Proposed funding is \$28,737,000. This research is carried out at Albany, CA; Ames, IA; Athens, GA; Beltsville, MD; Clay Center, NE; College Station, TX; Fayetteville, AR; and Wyndmoor, PA. This research determines the presence and numbers of specific pathogens in various environments both on the farm and during slaughter and processing; develops predictive models of bacterial growth rates and survival; develops specific pre-harvest and post-harvest controls for reducing pathogens during production and processing, such as competitive exclusion, vaccines, isolation rearing and new antimicrobial agents and processes; determines the attachment characteristics of various pathogens and develops more rapid methods to identify infected animals and animal products.

Question. Where will the recommended increase be implemented? How many scientists will be recruited for this research? How will these funds be used?

Answer. The recommended increase of \$4.1 million will be implemented at Albany, CA; Ames, IA; Athens, GA; Beltsville, MD; Clay Center, NE; College Station, TX; Wyndmoor, PA; and Pullman, WA.

Fifteen scientists requiring about \$4 million will be recruited for this effort. The remainder of the funds will be used to supplement and accelerate existing programs.

These funds will be used to develop: production systems to reduce human pathogens in food producing animals and poultry, in particular, Salmonella and Campylobacter; pre-/postharvest intervention strategies for animal and plant based products; pathogen-reducing slaughter processes; food pathogen risk assessment technologies; rapid pathogen diagnostic and detection; advanced inspection methods utilizing machine vision, pasteurization requirements to destroy pathogen in egg products; and also to characterize the antibiotic resistance of specific pathogens found in food producing animals.

Question. Provide the Committee with actual obligations your Agency incurred in fiscal year 1996 for research on *E. coli*; salmonella; listeria and campylobacter. How many scientists were involved in this research?

Answer. Twenty-six scientists were involved in this research in fiscal year 1996. The actual obligations ARS incurred are as follows:

	<i>Actual obligation</i>
<i>E. coli</i>	\$1,226,606
Salmonella	5,674,131
Listeria	33,435
Campylobacter	869,069

INTEGRATED PEST MANAGEMENT (IPM)

Question. ARS is requesting an increase of \$4,000,000 for IPM research. What research is currently undertaken by ARS and by location? Provide funding and scientist effort.

Answer. In support of the Department's IPM Initiative, ARS currently conducts pest control research which includes projects to develop environmentally-friendly pest control technologies that emphasize classical and augmentation biological control, host-plant resistance, behavior modifying chemicals (e.g. pheromone mating disruptors and attracticides), sterile insect release techniques, autocidal control technologies, resistance management, cultural practices, and other related pest control tactics. ARS scientists are not only working to develop these component IPM technologies but are also involved with State, regional and local IPM teams in a variety of action-oriented implementation programs that demonstrate biologically-based pest control in on-farm situations. In addition, ARS has taken the lead in

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demonstrating the use of area-wide IPM tactics. The information on the location, funding and scientist effort for consolidated IPM projects currently undertaken by ARS is provided for the record.

Location	Fiscal year 1997—	
	Funds	Scientists
Fresno, CA	\$1,009,200	3.4
Salinas, CA	545,600	1.0
Shaftner, CA	230,800	0.8
Ft. Lauderdale, FL	657,500	3.0
Gainesville, FL	1,338,400	4.8
Miami, FL	460,000	1.3
Byron, GA	123,900	0.3
Tifton, GA	865,200	2.5
Ames, IA	56,200	0.3
West Lafayette, IN	86,400	0.4
Manhattan, KS	193,800	0.8
New Orleans, LA	142,500	0.8
Beltsville, MD	169,500	0.5
Morris, MN	265,200	1.0
Stoneville, MS	2,481,800	8.0
Columbia, MO	90,000	0.4
Lincoln, NE	279,900	1.3
Ithaca, NY	315,700	1.3
Raleigh, NC	48,300	0.2
Stillwater, OK	198,100	0.9
Charleston, SC	534,400	1.5
Brookings, SD	1,101,100	4.5
College Station, TX	898,500	3.7
Kerrville, TX	417,300	1.4
Weslaco, TX	691,300	1.8
Prosser, WA	144,600	0.5
Pullmann, WA	213,100	1.1
Yakima, WA	2,379,200	3.4
Headquarters	2,606,800	.....
Total	18,544,300	50.9

Question. How will the requested funds be implemented?

Answer. Of the \$4,000,000 requested, \$1,000,000 will be used for area-wide IPM and pilot-test programs; \$2,000,000 will be used for augmentation biocontrol and biologically-based IPM in field, horticultural and vegetable crops; and \$1,000,000 will be used for host-plant resistance and related pest management strategies.

Question. Please provide a breakdown of your chemical and non-chemical research components that fall within the general area of IPM.

Answer. Of the overall figure of \$134,236,000, \$106,798,700 (80 percent) is devoted to non-chemical research while \$27,437,300 (20 percent) is associated with research on chemical pest control technology. Our research related to chemical technology focuses on reducing chemical usages and substituting currently used chemicals with ones that are safer and more environmentally friendly.

CONTINGENCY FUND

Question. You report that you spent \$51,967 in 1995 for drydock, maintenance, marine vessel upgrade. How many vessels does ARS maintain to support the Plum Island operation? What is the annual cost of operating these vessels? What has been the cost of maintenance and upgrade for those vessels since 1990?

Answer. ARS presently maintains three vessels to support the Plum Island Animal Disease Center. The annual operating costs for these vessels are \$475,000 for staff and \$220,000 for fuel.

The cost of repairs and maintenance for fiscal years 1993 to 1997 are as follows:

Fiscal year	Funding
1993	\$215,284

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<i>Fiscal year</i>	<i>Funding</i>
1994	329,783
1995	241,336
1996	403,334
1997	¹ 300,000

¹ Estimate.

The contingency fund expenditure in fiscal year 1995 is included in the reported total cost for the year. Agency financial records are only maintained for five years therefore data for 1990–1991 is not available. In fiscal year 1992, the operations and maintenance contract under which the boats are operated did not provide these specific costs.

Question. Contingency Fund releases were provided to Frederick, Maryland, for TCK Smut and Karnal Bunt. How were these funds used?

Answer. In fiscal year 1996, \$187,164 was released to Frederick, Maryland, and \$79,592 was released to Raleigh, North Carolina, for an ARS/Grain Inspection, Packers, and Stockyards Administration cooperative study to determine how TCK spores are distributed in wheat shipments and how that distribution affects reliability of sampling for TCK smut on wheat detection. Frederick Maryland received \$370,893 for research on karnal bunt disease and to purchase the necessary research equipment.

PERFORMANCE GOALS

Question. The most important performance goal listed by ARS is that dealing with potential long-term benefits to agriculture and American citizens. However, you provide no indicators or how the Agency could determine such contributions from its research. Is this a realistic goal? If so, how will the Agency capture this data and identify it as an outcome of its research?

Answer. ARS' mission is to conduct research to address and solve agricultural problems of high national priority. As the ARS Strategic Planning Team (SPT) worked on the task of identifying measurements for research outcomes and impacts, they decided to include a measure that addressed the Agency's central mission by identifying ways for ARS to capture and report on "... research accomplishments with significant potential long-term benefits to U.S. agricultural industry and American society." The agency believes that this is a realistic objective. The mechanism for identifying and reporting these accomplishments will be an annual review by Research Leaders, the National Program Staff, and Area Directors in an effort to identify the research products with the greatest probability of making an important contribution to American agriculture. This process will be as objective as possible, but it is not always possible to immediately determine the value, application or longer term impact of research. ARS intends to identify and report accomplishments each year in the Agency's annual performance plan.

Question. It appears that numbers of published papers and presentations are the only goals that ARS could express that lend themselves to tracking and quantifying. This is similar to tracking the number of assets and scientists the Agency employs—but not very meaningful in terms of measurable contributions. Given the effort involved in the GPRA program, have you concluded that this represents the only goals and measurements available to judge the merits of your agency's contributions?

Answer. Shortly after GPRA was enacted, ARS established an agency-wide Work Group that sought to apply these new programmatic accountability principals in a research environment. To ascertain how other research agencies were responding to GPRA, ARS helped initiate and co-chair the Research Round Table, an ad hoc committee consisting of the major Federal research agencies. This group met monthly for 18 months in an effort to define and resolve the issues posed in this question. ARS and its colleagues in REE also met with the research directors from the food and agricultural industry to learn how these issues are handled in the private sector. From these discussions, ARS developed a draft strategic plan that mixed broad qualitative goals and output measures such as the number of papers published or the number of new patent applications. Qualitative performance goals can be found under each Specific Goal and Initiative in the ARS plan. One example of a qualitative performance goal, taken from Specific Goal 1.2.2 "New Uses and Products," states that ARS will "experimentally demonstrate genetically improved crops with potential for successful introduction." While refereed papers and other outputs are important measures of productivity, quality, and substance in the scientific community, they do not, as you indicated in your question meaningfully measure the contributions of the Agency's research.

What emerged from all these activities and the comments we received on our draft plans was a clearer picture of just how difficult, if not impossible, it is to apply

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metrics to research, especially basic research. The key points that emerged from this entire process include: (1) the outcomes and impacts of research are difficult to identify and quantify in advance, (2) the value and potential application of knowledge gained is not always immediately recognized and understood, (3) results are not always predictable, (4) there is a high percentage of negative determinations or findings, and (5) the unknown cannot be measured. After much deliberation, we have concluded that the best approach is to abandon the numerical measures of outputs and rely instead on qualitative measures in each annual performance plan describing what the agency expects to produce in a given fiscal year. This new approach is reflected in the most recent draft of the ARS strategic plan dated April 21, 1997.

SELECTED EXAMPLES OF PROGRESS

Question. Drip irrigation in the Southeast can be profitable. How new is this technology?

Answer. With the development of plastics during and after World War II, the idea of drip irrigation became feasible. After a small irrigation manufacturing firm in New York began to supply the first drip irrigation equipment to water plants in greenhouses, researchers in Israel and the United States began to expand their efforts in the early 1960's. The first commercial-scale, demonstration study occurred on a grower's avocado orchard in San Diego, California, in 1969.

Question. Isn't this technology being utilized in other regions of the U.S.?

Answer. Yes. Drip irrigation is used in the Southeast, Southwest, and West, primarily, to irrigate vegetable, fruit, and vine crops. The largest usage of drip irrigation systems is in Florida and California, and about 4 percent of the irrigated land in the United States is currently being irrigated by this technology.

Question. Explain the potential use of this technology and the benefit to be derived.

Answer. Historically, the use of drip irrigation technology has been associated with irrigating high-value crops where soils are marginal, terrain is steep, and water costs are high. Potential benefits include reduced water use and cost, improved yields, product quality, salinity control, and nutrient management; and reduced evaporative losses and weed growth. Drip irrigation's potential use becomes an economics decision, balancing the above-noted benefits against the relatively high initial cost of the hardware, significant maintenance costs, and increased management requirements.

Question. ARS scientists at Orlando, Weslaco, and Beltsville have utilized a parasitic wasp to control the brown citrus aphid, boll weevils, and whiteflies. Is the same wasp being employed in the research studies at three ARS locations? Explain.

Answer. ARS scientists in Orlando, Weslaco, and Beltsville are each using different wasp species to respectively control the brown citrus aphid, boll weevils, and whiteflies. Biological control is the science of using natural enemies (parasites, pathogens and predators) to control insect pests using biological rather than chemical means. Beneficial parasitic wasps, are highly specialized and generally attack only a single or very few species of insects. This specialization makes them safe to use as they do not affect humans or most other nontarget species (including other insects) that are important to agriculture and the natural environment. Although this is a positive trait for environmental safety, it also means that research must be conducted on different parasitic wasps for each major insect pest. ARS scientists work closely together across geographic locations to identify, develop, implement and test new biological control technologies. Thus, the research at Orlando, Weslaco and Beltsville, although unique in some ways, employ integrated information and activities to assist one another in solving severe pest problems such as the brown citrus aphid, boll weevil and silverleaf whitefly.

Question. What is the relationship between the scientific studies on the parasitic wasp on whitefly and the irrigation work on whiteflies in cotton at Phoenix, Arizona?

Answer. ARS scientists at Phoenix, Arizona, have determined that irrigation patterns affect the attractiveness of the cotton crop to adult whiteflies. Water stressed plants are more attractive to these adults and thus receive more eggs than greener more highly irrigated plants. Although no direct effects have yet been measured on parasitic wasps, ARS scientists in Phoenix believe that the more highly irrigated cotton would have lower whitefly numbers and thus would be sprayed less with chemical insecticides. Fewer chemical insecticides mean a more positive environment for parasitic wasps allowing wasp numbers to increase more than in similar pesticide treated areas. ARS scientists studying parasitic wasps in other locations have found that increased nitrogen fertilizer which stimulates plant growth also affects the attractiveness of these plants to whitefly adults. ARS scientists are linking

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these findings together through an ARS led "Silverleaf Whitefly: 5-Year National Research and Action Plan".

Question. What is the coordination and relationship of these studies and the studies on cotton insects at your Gainesville laboratory investigating plant emissions to attract beneficial insects?

Answer. ARS conducts research on parasitic wasps affecting whiteflies at several different locations including, Beltsville, MD; Montpellier, France; Orlando, FL; Phoenix, AZ; and Weslaco, TX. These programs are coordinated within the Agency by the ARS National Program Staff, and with other state and federal institutions through an ARS led "Silverleaf Whitefly: 5-Year Research and Action Plan". Although the ARS scientists in Gainesville, FL are investigating parasitic wasps that attack caterpillars rather than whiteflies, they have found that plants under stress by defoliating caterpillars cause cotton to produce volatile chemicals that attract certain parasitic wasps that then search these plants for damaging caterpillar pests. Currently, this research is investigating basic aspects of plant, pest and parasite interactions. The long term goal of this work is the manipulation of these interactions to better manage parasitic wasps by controlling their behavior through plant characteristics that may be enhanced through plant breeding or genetic engineering. Through the ARS National Program on "Crop and Commodity Pest Biology, Control and Quarantine", studies of this type are integrated by the ARS National Program Staff into sets of nationally organized activities to accelerate the development and application of many different types of biologically-based pest control efforts.

Question. ARS has discovered a new class of insect repellent, Piperidine. Does ARS have a CRADA for commercial development?

Answer. ARS does not have a CRADA for the commercial development of Piperidine. Piperidine, a natural repellent of insects, is being evaluated as a component of fire ant baits. It is expected that by incorporating Piperidine into our proprietary fire ant baits, ant species we do not want attracted to the bait will be repelled. It seems that fire ants themselves use Piperidine to repel other ant species from their food and nests. ARS has a Memorandum of Understanding with the University of Brussels, Belgium, to produce Piperidine, which must be synthesized in a laboratory, for ARS' use. Additional studies are rapidly progressing and ARS hopes to identify a commercial partner before the end of the year.

Question. Irradiation of blueberries is a proposed alternative to methyl bromide. How will acceptance of this quarantine treatment enhance U.S. and foreign markets? Is this procedure acceptable to the market place? Is this an effective substitute for methyl bromide? What other commodities are subject to this treatment?

Answer. Some countries that import U.S.-produced blueberries require a methyl bromide fumigation treatment to kill quarantined insect pests that might be present in the commodity. Methyl bromide will not be available for use in the U.S. after January 1, 2001. The short shelf life and delicate nature of blueberries limits options for replacing methyl bromide. Irradiation is a promising methyl bromide alternative to disinfest blueberries with minimal phytotoxic effects. Acceptance of this treatment will allow continued shipment of blueberries to countries currently requiring methyl bromide fumigation.

Radiation is approved for food use in many countries. Recent tests of Hawaiian commodities and Florida strawberries marketed in the U.S. showed wide acceptance by consumers. Consumers are likely to become even more comfortable with this technology with the publication of new regulations allowing radiation to treat chicken and other meats and as a fruit fly quarantine treatment.

Many commodities, including spices and grains are irradiated in many countries. The U.S. is publishing regulations to allow irradiation of various animal products to ensure microbial decontamination and of fruits and vegetables to disinfest fruit flies. As methyl bromide is phased out in many countries around the world in the next several years, there will be an increased reliance on radiation as a quarantine treatment to replace methyl bromide for many commodities.

Question. Describe the utilization and cost benefits U.S. cotton farmers are realizing through the use of the GOSSYM-COMAX cotton model. How many farmers are employing this model and what are the total estimated savings from its application?

Answer. Over 500 producers have licensed GOSSYM-COMAX since 1986 and over 200 growers have recently renewed their licenses or are new buyers of licenses, while the number of producers currently using old versions of the model are unknown. In addition to individual farmers, about 50 consultants use GC. They consider the number of clients serviced to be proprietary information. According to a commissioned report by Dr. Howard Ladewig, Texas A&M University, farmers across the cotton belt who have not licensed GOSSYM-COMAX (GC) are benefiting from this technology's principles in a number of ways:

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- 60 percent of all cotton growers are using plant mapping, a practice that was introduced by GC.
 - 54 percent of GC users have modified their irrigation schedules.
 - 76 percent of GC users have modified their nitrogen fertilization rates.
 - 47 percent of GC users pay more attention to early-season insect damage.
 - 29 percent of GC users have reduced their production costs.
 - 57 percent of GC users have increased cotton yields.
- Net income increase was found by Dr. Ladewig to average \$45 per acre per year, as determined by the growers.
- Dr. Ladewig also estimated that about \$187 million has been the total financial benefit of GC to date.

NATIONAL AGRICULTURAL LIBRARY

Question. The National Agricultural Library supports information centers including the Rural Information Center, Water Quality Information Center, Animal Welfare Information Center, Technology Transfer Information Center, Plant Genome Information Center, Food and Nutrition Information Center, and the Biotechnology Information Center. What are the resources currently committed to these programs in each of fiscal years 1996–98?

Answer. The appropriated resources committed for the Information Centers for the three fiscal years are provided below.

Information center	Fiscal year—		
	1996 (actual)	1997 (budgeted)	1998 (estimated)
Rural	\$411,540	\$393,000	\$403,485
Water quality	233,708	232,000	237,107
Animal welfare	708,076	711,000	720,825
Technology transfer	245,096	230,000	231,636
Plant Genome	1,448,668	1,383,000	1,383,000
Food and Nutrition	705,466	688,000	680,331
Biotechnology	182,340	165,000	130,748

Question. Provide the NAL appropriations and staff year levels for fiscal years 1996, 1997, and 1998.

Answer. The NAL appropriations levels for fiscal years 1996, 1997, and 1998 are \$19,464,000, \$19,319,000, and \$19,394,000 respectively. The staff year levels for fiscal years 1996, 1997, and 1998 are 209, 201, and 196 respectively.

ORGANIZATION OF NAL

Question. Briefly describe the major organizational components of the NAL and provide respective funding and staffing levels in each of fiscal years 1996–1998.

Answer. NAL has 4 major organizational components:

The Office of the Director (OD) provides leadership, general support, and building services.

The Technical Services Division (TSD) selects and acquires information resources for the collection and provides bibliographic and subject access to that literature.

The Public Services Division (PSD) facilitates access to the information and materials needed by researchers, scientists, educators, administrators and the general public through a variety of general and specialized information services, document delivery services, and instructional programs.

The Information Systems Division (ISD) is responsible for the automation activities of NAL.

The funding and staffing levels for each component (including repair and maintenance funding) follow:

	Fiscal year 1996 (actual)		Fiscal year 1997 (budgeted)		Fiscal year 1998 (estimated)	
	Funding	Staffing	Funding	Staffing	Funding	Staffing
OD	\$4,310,701	13	\$3,074,000	15	\$3,086,000	13
TSD	6,629,073	82	6,971,000	82	6,998,000	82
PSD	6,114,802	76	6,457,000	74	6,482,000	72
ISD	3,831,919	24	2,817,000	30	2,828,000	29

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	Fiscal year 1996 (actual)		Fiscal year 1997 (budgeted)		Fiscal year 1998 (estimated)	
	Funding	Staffing	Funding	Staffing	Funding	Staffing
Total	20,886,495	195	19,319,000	201	19,394,000	196

NATIONAL AGRICULTURAL LIBRARY OBJECT CLASSIFICATION

Question. Provide a breakdown of NAL's 1996 obligations by object classification for fiscal years 1996–98.

Answer. The object classification table for the National Agricultural Library for fiscal years 1996–98 is provided for the record.

Object classification	Fiscal year—		
	1996 actual	1997 appropriation	1998 budget estimate
Personnel Compensation			
11.1 Permanent positions	\$7,782	\$8,162	\$8,192
11.3 Positions other than permanent	258	270	271
11.5 Other personnel compensation	88	92	92
Total, Personnel Compensation	8,128	8,524	8,555
12.0 Personnel benefits: civilian retirement	1,619	1,699	1,706
13.0 Former employees	18		
Total, Object Classes 11–13	9,765	10,223	10,261
Other Obligations			
21.0 Travel and transportation of persons	132	108	108
22.0 Transportation of things	91	75	75
23.3 Comm., util, other rents	739	605	605
24.0 Printing and reproduction	110	90	90
25.2 Other services	2,163	1,768	1,805
25.3 Purchases of goods and services	62	51	51
25.4 Operations and maintenance of facil	1,928	1,577	1,577
25.5 Research and development contracts	1,310	1,072	1,072
25.7 Operations and maintenance of equip	150	122	122
25.8 Subsistence and support of persons	6	5	5
26.0 Supplies and materials	1,259	1,030	1,030
31.0 Equipment	2,481	2,029	2,029
41.0 Grants, subsidies and contributions	690	564	564
Subtotal, All Other	11,121	9,096	9,133
Total	20,886	19,319	19,394

Question. What is the annual maintenance cost of the Beltsville NAL facility for each of fiscal years 1996–1998?

Answer. The annual maintenance costs include NAL's Repair and Maintenance budget as well as contracts for building maintenance activities such as cleaning, an elevator repair contract, and other similar activities. The total maintenance costs for fiscal years 1996–98 were: 1996—\$1,358,700 (actual); 1997—\$1,333,000 (budgeted); and 1998—\$1,346,000 (estimated).

Question. Identify funding by agency that NAL receives from Federal and non-federal sources.

Answer. The funding by agency that NAL receives from Federal and non-federal sources is provided in the table below:

NAL Federal funding:	
Office of the Secretary	\$32,114
Agricultural Marketing Service	45,195
Animal Plant Health Inspection Service	65,862
Cooperative State Research, Education, and Extension Service	270,157
Economic Research Service	76,500
Food and Consumer Service	405,950
Forest Service	40,805
Office of Operations	2,103

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Natural Resources Conservation Service	53,387
Foreign Agricultural Service	23,857
Grain, Inspection, Packers and Stockyards Administration	4,106
Rural Development	125,053
Office of the Inspector General	1,949
Food Safety and Inspection Service	107,647
Farm Service Agency	65,689
National Bureau of Standards	6,000
Food and Drug Administration	30,000
National Institutes of Health	692,370
National Institute of Mental Health	12,500
Department of Justice	30,000
National Finance Center	2,147
National Agricultural Statistics Services	12,500
Total, NAL Federal funding	2,105,891
NAL non-Federal funding:	
University of Mississippi	43,000
Virginia Polytechnic Institute and State University	16,000
National Rural Electric Cooperative Association	7,028
Total, NAL non-Federal funding	66,028
Total, NAL funding	2,171,919

Question. Identify the services NAL provides other agencies through reimbursable agreements.

Answer. NAL provides three types of services that other agencies fund via reimbursable agreements. (1) Through the Current Awareness Literature Services (CALIS), NAL provides USDA researchers ongoing literature searches through a centralized electronic database. (2) NAL also arranges Dunn and Bradstreet financial database services that provide USDA agencies with business and financial reports. (3) Additional reimbursable arrangements make it possible for NAL to provide specialized information services that support other agencies. The Rural Information Center, for example, provides information and referral services to local government officials, community organizations, health professionals and organizations, rural electric and telephone cooperatives, libraries, businesses, and rural citizens working to maintain the vitality of America's rural areas. Through a separate reimbursable agreement, the Alternative Farming Systems Information Center operates the Sustainable Agricultural Network which fosters the exchange of scientific and practical information on sustainable agricultural systems.

Question. Agricultural Genomes Information System. ARS also maintains the GRIN system. How do these two systems differ? Why are they managed separately?

Answer. The Agricultural Genomes Information System (AGIS) and the Germplasm Resources Information Network (GRIN) differ by being designed, at least initially, to serve somewhat different groups of users, to play different information management roles, and to address different objectives. Because of the generally substantial differences in the preceding factors, the databases were developed and are managed separately but contain appropriate links between the genomic and germplasm data.

The GRIN was developed primarily to play two central roles in managing germplasm and associated information. First, it is the means whereby germplasm managers of the National Plant Germplasm System (NPGS) manage the local inventory of information, seeds, and plants conserved at various NPGS sites. For example, it is used to record requests for germplasm accessions, to keep a running tally of the number of seeds, clones, available per accession, etc. It also serves as an archive for the results of seed quality assays, the ambient experimental conditions during germplasm production, and similar information. The preceding uses require that a variety of standard and nonstandard reports be generated periodically from the GRIN database by a variety of germplasm managers. In general, the segments of GRIN devoted to inventory management are only accessible to NPGS germplasm managers.

Second, GRIN is designed to help encourage the use of genetic diversity, in the form of germplasm, in crop improvement and in scientific research. An extremely wide variety of information is available on GRIN for germplasm accessions, because the user community is extremely broad, ranging from plant scientists and breeders, to educators and students, to crop producers. The information entered into GRIN

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emphasizes traits that are often immediately useful for crop production and improvement, such as yield, adaptation, and resistance to biotic or abiotic stresses. Often, the genetic basis of the preceding traits is unknown, or may be irrelevant for effectively deploying the traits for certain applications.

In contrast to GRIN, AGIS is designed primarily to make information relevant to plant genome research readily available in useful formats. The primary clientele for AGIS is the biological research community, especially plant geneticists.

There are also substantial technical differences between the systems. For example, they were constructed with somewhat different software, with the GRIN now being based on the industry-standard Oracle. AGIS is Unix-based, and constituent crop-specific genome databases in AGIS have been constructed with ACeDB or with Sybase (the maize genome database) software. The database structures of GRIN and AGIS—the electronic arrangement of the data—are different, with GRIN generally arranged around the germplasm accession as the central, unifying element, with accession attributes, such as physical location, being extremely important descriptors. In contrast, the constituent crop-specific databases of AGIS focus on specific genes and their locations on the genome as the unifying database structural elements.

Despite their differences, various elements of the two separate database systems are now linked electronically via the World-Wide-Web (WWW). In the future, it is anticipated that additional components of the two systems will be similarly linked. Nonetheless, it is likely that the two database systems will remain separate entities in the future, because of the intrinsic factors noted above.

NATIONAL PRESERVATION PROGRAM

Question. NAL established a Preservation Officer position. How many staff years are employed in this effort?

Answer. The equivalent of four staff years are employed in the NAL preservation effort.

Question. How much money does NAL spend in contracting for preservation workload?

Answer. NAL is spending \$215,000 in fiscal year 1997 on contracts and cooperative agreements to obtain a variety of preservation services and products.

Question. What does the Agency envision this effort costing on an annual basis?

Answer. NAL envisions that a fully implemented ongoing preservation effort would cost more than \$2 million per year.

Question. Please explain, in more detail, the National Preservation Program for Agricultural Sciences.

Answer. NAL has established a national preservation program for agricultural sciences in conjunction with the United States Agricultural Information Network. The National Preservation Plan for Agricultural Literature is a discipline-based approach to creating a distributed system for preserving agricultural literature. The Plan calls for each state in the U.S. to take responsibility for preservation of its own state and local agricultural literature. This will result in the systematic identification of the universe of state and local level published literature. NAL's role in the Plan is to focus on federal publications, rare books, manuscripts and other uniquely held materials.

PERFORMANCE MEASURES AND GOALS

Under the outcomes listed by ARS, NAL will receive and handle customer requests within established timeframes: deliver of documents, 95 percent; and library research (references), 95 percent.

Question. Who are the clientele of the Library?

Answer. The clientele of the Library includes members of Congress and their staff; Federal administrators and managers; state and local officials of government; agricultural program administrators, scientists, engineers, and researchers; extension personnel; educators; employees of agriculturally-related businesses and industries; students and scholars; consumers and the general public.

Question. How many types of electronic and hard copy delivery systems are in place?

Answer. NAL delivers both publications and reference services, and different delivery systems are appropriate in each case. For distributing publications, two electronic systems are used. One system is via telefacsimile, and the other utilizes the Ariel System. Ariel involves the use of a document delivery software to deliver publications over the Internet. Hardcopy documents are generally sent by U.S. mail, although rush delivery is sometimes arranged by other carriers.

For the delivery of reference services, all the common methods of communication are employed. Electronic means include electronic mail, telefacsimile and telephone.

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Other reference requests are answered via the U.S. mail. Reference information of general use to NAL clientele are available 24 hours a day via the World Wide Web on the Internet.

Question. How will you document efforts to achieve these goals?

Answer. NAL periodically samples workflow to ensure prompt document delivery and reference services for customers. Based on a comparison of data from before and after the designated period we will be able to document progress toward these goals.

Question. How will you distinguish performance achievement among these goals?

Answer. NAL will distinguish performance achievement among these goals by comparing data from before and after the designated period.

BUILDINGS AND FACILITIES

NAL completed a facility study in 1991 that identified numerous code, mechanical, electrical and architectural deficiencies estimated at \$18 million.

Question. Please list the deficiencies and costs identified in this study.

Answer. In general the deficiencies and costs can be categorized into three major areas of work: architectural, mechanical/plumbing, and electrical. The types of deficiencies and associated estimated costs are as follows:

Architectural deficiencies include items such as deteriorating brick; exterior glazing leaks; egress requirements; fire code deficiencies; accessibility issues; and other items of this type. The estimated cost to correct these deficiencies is \$4.7 million.

Mechanical/plumbing deficiencies include items such as lack of sprinkler system; insufficient cooling capacity; lack of temperature and humidity control; poor air circulation; lack of vacuum breakers on hose bibbs; worn out water control valves; and other miscellaneous items. The estimated cost to correct these deficiencies is \$10.2 million.

Electrical deficiencies include items such as improper lighting levels; insufficient emergency power system; branch circuit wiring devices in disrepair; insufficient lightning protection system; and other miscellaneous items. The estimated cost to correct these deficiencies is \$3.1 million.

The \$18 million estimate is based on constant 1998 dollars. The total program cost will increase depending on how much is appropriated each year and the corresponding rate of inflation.

Question. Why has NAL waited until fiscal year 1998 to request funding for these deficiencies?

Answer. When the facility study was completed in late fiscal year 1991, the NAL Director worked with USDA building engineers to analyze and prioritize the recommendations. Some existing funds were used to begin addressing the highest priority deficiencies, and the 1991 study has been used since its receipt as justification for increased building-related appropriations. In fiscal year 1992, NAL did receive a small increase in its annual Repair and Maintenance budget.

Question. How many phases will be involved in correcting facility deficiencies and adding storage space?

Answer. The number of phases to correct facility deficiencies and add storage space is dependent on both funding and impact to library services.

Question. How much will each phase cost and what work will be accomplished?

Answer. Due to uncertainty regarding future funding levels, the Agency has not developed a firm phasing plan beyond Phase 1. Phase 1 will address the replacement of boilers, renovations to the first, third, fourth, and fifth floors, and installation of sprinklers. It is estimated at \$6 million.

Question. You state that in addition to these facility deficiencies, NAL needs to acquire additional storage space. How do you plan to do this?

Answer. NAL plans to acquire additional storage space through more efficient use of its existing space. Current plans call for returning the fifth floor to a stack floor and relocating the staff currently located on the fifth floor to floors one, three, and four.

Question. What is the cost involved for added space?

Answer. It is not expected that there will be any significant cost increase for this work since most of the work required would have been needed to address the facility deficiencies.

Question. Is this cost part of the original study?

Answer. The cost for added space was not directly identified in the original study, however, addressing the architectural, mechanical/plumbing, and electrical deficiencies will require extensive tear out of existing finishes. It will be during the repair of these disturbed areas that staff consolidation can be accommodated.

In addition to the Facility Condition Study, the NAL also commissioned a space utilization study in 1990/1991 to investigate how best to meet competing space

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needs for the staff, the collection, and library users. As a result of that study, it became clear that NAL needed more space for collections.

Question. NAL has annual funding appropriated for building repairs. How will these funds be used in defraying these costs?

Answer. NAL has available \$900,000 per year in repair and maintenance funds. Much of this funding goes to immediate repair and maintenance needs not necessarily related to the major facility deficiencies being addressed in this effort. An additional problem is the repair and maintenance funds are annual appropriations, therefore, they cannot be used to supplement the Buildings and Facilities appropriations.

Question. Detail your plans and costs in conjunction with the overall \$18 million. *Answer.* Because of the uncertainty regarding what immediate repair and maintenance demands may be made on the annual repair and maintenance account from year to year, and the difference in type of funds, no plans have been developed addressing how these repair and maintenance funds could supplement the Building and Facility request. The \$18 million cost estimate is based on 1998 dollars. The total program cost will increase depending on how much is appropriated each year and the corresponding rate of inflation.

Question. The justification for \$18 million "in 1998 dollars" is tied to the comprehensive Facility Condition Study. This study refers to deficiencies. The request for 1998 includes First Floor Alterations. Were these alterations also included in this study?

Answer. These alterations were not specifically included in the Facility Condition Study.

Question. Are alterations requested outside this study, and if so, please detail for the Committee your request?

Answer. In addition to the Facility Condition Study, the NAL also commissioned a space utilization study in 1990/1991 to investigate how best to meet competing space needs for the staff, the collection, and library users. As a result of that study, it became clear that NAL needed more space for collections. It was determined that the most cost-effective approach to the storage issue was to return the fifth floor, originally designed for book storage and subsequently modified for staff use, back to book storage and relocate the personnel currently occupying the fifth floor to floors one, three, and four.

Question. How much of the \$18 million is planned for alterations? *Answer.* Correcting the numerous facility deficiencies will require demolishing existing facility components to access the underlying utilities. The additional cost of alterations required to accommodate personnel displaced from the fifth floor is not expected to significantly increase the cost of correcting facility deficiencies beyond the \$18 million estimate.

Question. Funds are requested to alter existing space. Please provide for the Committee the current utilization of NAL space and planned use for this space.

Answer. The current and planned utilization of NAL space (exclusive of mechanical areas) is as follows:

Purpose	Approximate percent of space usage	
	Current	Planned
Office space	38	33
Collections	53	59
Public areas	9	8

Question. What areas need to be modified? *Answer.* In order to increase the space available for collection growth, it is necessary to reduce slightly the office space and public areas.

OBJECT CLASS

Question. The actual full-time equivalents for 1994, 1995 and 1996 are well below the Agency's authorized ceiling for those years. What is the cause for underutilization of your work force?

Answer. The fiscal year 1995 budget proposed closure of 20 research locations. Hiring during fiscal year 1994 was curtailed and vacancies were held open to provide maximum placement opportunities for affected employees. Although final congressional action directed the closure of only 10 locations and 2 programs, the locations which did not close began the year with a significant number of vacancies. In

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addition, in fiscal year 1995 there was a freeze placed on all hires outside of USDA and personnel actions were frozen on grade 13–15 positions. These actions caused the agency to begin fiscal year 1995 with a large number of vacancies. Early retirement was also offered to eligible employees in fiscal years 1994 and 1995 to comply with the Administration's streamlining initiatives. This action produced additional vacancies and further reduced full-time equivalents (FTE) usage below ceiling levels. ARS is now moving toward aggressively to recruit new personnel to fill existing vacancies but is experiencing a significant lag problem and new offsets due to continuing retirement attrition.

Question. Please provide a detailed breakdown of your equipment purchases in fiscal year 1996. Please distinguish scientific or laboratory equipment purchases, computer and related costs and other major purchases for the Committee.

Answer. A detailed breakdown of ARS equipment purchases for fiscal year 1996 is provided for the record. The information follows:

	<i>Fiscal year 1996 actual</i>
<i>Object Class 31 Equipment</i>	
Research Equipment such as: Atomicabsorbtion Spectrophotometer, Bicemek 2000 Laboratory Automatic, Accelerated Solvent Extractor, Gas Chromatograph Laboratory Casework and Fumehoods, Hewlett Packard Benchton, 6 Incubators, Near Infra Red Instruments, and other scientific equipment	\$6,871,545
Furniture and Fixtures	303,735
Laboratory Equipment such as: Laboratory Casework and Fumehoods, Autoclaves, Columns, High Pressure Liquid Chromatograph Ultracentrocentrafuses, and other similar lab equipment	13,097,007
Snow Telemetry Equipment	1,376
Engineering Equipment	58,788
Radio and Communications	110,672
Agricultural Machinery and Equipment (includes heavy vehicles such as pickup trucks and tractors)	622,954
Subtotal	21,066,077
ADP Software, Personal Computers	4,451,225
Motor Vehicles, Working Capital Fund Fleet Equipment	1,264,115
All Other Equipment: Telephone, office machines, reproduction machines, etc	9,878,830
Subtotal	36,660,247
Buildings and Facilities Account	400,000
Total	37,060,247

Question. How much money was obligated for consultant services in fiscal year 1996?

Answer. There were no funds obligated for consultant services under 5 U.S.C. 3109 in fiscal year 1996.

Question. Please provide a detailed breakdown of obligations incurred in fiscal year 1996 in the area of "Other Services": contracts for research services, contracts for administrative services, etc.

Answer. Provided is a detailed breakdown of obligations incurred in fiscal year 1996 in the area of "Other Services": contracts for research services, contracts for administrative services, etc.

Other services

	<i>Fiscal year 1996</i>
Research and Development Contracts:	
Service Contracts	\$26,705,209
Research Contracts	17,577,024
Research Support Agreements	26,494,290
Interagency Agreements	7,356,339
Specific Cooperative Agreements w/State Institutions	20,246,792
Specific Cooperative Agreements w/Private Corporations and Institutions	2,391,926
General Cooperative Agreements	11,491,518
Advisory and Assistance Services from Non-Governmental Sources	1,192,000

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	<i>Fiscal year 1996</i>
Contractual Services for: Auditing, Stenographic Services, Training, Reimbursable Details, Fees, Health Units and Related Activities	6,523,126
Purchase of Services from USDA Account: NFC Processing/Greenbook Costs, Video and Film Services, ADP Data Processing Services and Related Services	2,916,194
Operation and Maintenance of Facilities: Contracts, Including Government-Owned Contractor-Operated Facilities, and Services Contracts and Routine Repair, Upkeep of Land, and Maintenance of Facilities, and A-76 Contractual Services	20,828,308
Operation and Maintenance of Equipment: Maintenance of Motor Vehicles, Office Equipment, Telephones, ADP Software, Other General Type Equipment	9,121,296
Subsistence and Support of Persons	923,936
Medical Care (Clinical/Services)	185,592
Subtotal, Other Services	153,953,550
Building and Facilities Contracts	20,985,000
Total, All Other Services	174,938,550

Question. Provide a breakdown of the costs associated with "Personnel Benefits" in fiscal year 1996.

Answer. A breakdown of costs associated with "Personnel Benefits" in fiscal year 1996 is provided for the record. The information follows:

<i>Personnel benefits</i>	<i>Fiscal year 1996 actual (In thousands)</i>
Contribution to CSRS	\$12,313
(Number of Employees)	(3,127)
Contribution to FERS (Includes Thrift Savings Plan)	29,498
(Number of Employees)	(4,186)
Health Insurance	17,368
Life Insurance	618
Workmen's Compensation	2,790
Quarters Allowance	1,021
Other costs, e.g. FICA, Medicare	6,780
Subtotal Benefits	70,388
Former employees	434
Total, Personnel Benefits	70,822

FUNDS AND RESEARCH MANAGEMENT

Question. Again in fiscal year 1996 as in fiscal year 1995, ARS was under its personnel ceiling by a significant 300 full-time equivalents. How much money budgeted for compensation for these positions was saved by your Agency?

Answer. A total of \$12.4 million was saved due to ARS being below ceiling.

Question. What was done with these savings?

Answer. A portion of these savings accrued to Headquarters and were reallocated as follows:

<i>Use of funds</i>	<i>Fiscal year 1996 funds (In thousands)</i>
Area-Wide Priorities(Research Equipment and Other High Cost Needs)	\$2,193.9
Location Closures, Conversions, and Transfers	2,299.5
Remedial Investigation and Feasibility Study (Beltsville, MD)	1,400.2
ADP and Other Infrastructure Upgrades	1,147.9
Removal Actions (Hazardous Waste Material)	436.9
RCRA Closure Sites (Greenport, NY)	360.0
SES Relocations	309.5
Roof Repairs (Beltsville, MD)	275.8
Oil Spill (Orient Point, NY)	164.6
Summer Intern Program	118.0
USDA Liaison Program	100.0
ESA Phase II Sampling (El Reno, OK)	70.0

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<i>Use of funds</i>	<i>Fiscal year 1996 funds (In thousands)</i>
Agency-Wide Hazardous Waste Cleanup	68.4
Subtotal	18,944.7

¹The balance of accrued lapsed salaries was retained at ARS field locations for locally-based spending decision. The primary uses of these funds were for research equipment, employee relations, facilities repair and maintenance, safety and health improvements, and unanticipated operating needs.

Question. To what extent were these funds obligated at the locations where they were saved?

Answer. Approximately, 40 percent of the funds saved were obligated at the locations where they were saved. The remaining 60 percent was used for Agency priorities not necessarily at the location where the funds were saved. An example of this would be the funding provided for location closures; no savings occurred at these locations, however, funds were obligated at these sites for closure costs.

Question. How many active projects does ARS currently engage?

Answer. 1200 individual research projects are in progress at this time.

Question. How many scientists are currently on-board?

Answer. There are currently 1,810 permanent scientists on-board in ARS as of April 29, 1997. Additionally, ARS employs a variable number of temporary scientists or post-docs on 2 to 4 year appointments. The current number of post-doctoral scientists is 312.

EXTRAMURAL FUNDING

Question. Please list the funding ARS commits to Land Grant Universities. Please identify these amounts by recipient.

Answer. A list of funding committed to 1890 Land Grant Universities follows:

<i>School</i>	<i>Fiscal year 1996</i>
Alabama Agri and Mech College	\$12,500
Alcorn State (MS)	488,300
Auburn University	71,000
Clemson University	41,000
Colorado State University	609,500
Cornell University	734,400
Florida Agri and Mech University	5,100
Iowa State University	143,000
Kansas State University	274,700
Louisiana State University	146,700
Michigan State University	250,700
Mississippi State University	1,080,700
Montana State University	874,500
New Mexico State University	687,400
North Carolina State University	976,300
North Dakota State University	215,600
Ohio State University	343,800
Oklahoma State University	144,500
Oregon State University	479,400
Pennsylvania State University	87,600
Purdue University	708,800
Rutgers University	98,200
Southern University	340,900
Texas A&M University	1,064,500
Univ of Alaska	6,000
Univ of Arizona	309,100
Univ of Arkansas	456,700
Univ of California	2,247,000
Univ of Connecticut	80,000
Univ of Delaware	4,500
Univ of Florida	1,603,700
Univ of Georgia	377,500
Univ of Hawaii	1,507,300
Univ of Idaho	162,400
Univ of Illinois	470,700
Univ of Maryland	784,200
Univ of Massachusetts	10,000

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<i>School</i>	<i>Fiscal year 1996</i>
Univ of Minnesota	435,200
Univ of Missouri	685,800
Univ of Nebraska	749,500
Univ of Tennessee	149,900
Univ of Vermont	45,000
Univ of Wisconsin	720,900
Univ of Wyoming	48,700
Utah State University	156,000
Virginia Polytechnic Institute and State Univ	100,000
Washington State University	859,300
 Totals	 21,848,500

Question. Please identify other extramural recipients of ARS research contracts.
Answer. In fiscal year 1996 ARS committed \$11.77 million to Tufts University and \$4.22 million to Westat Inc. for research contracts.
Question. In fiscal year 1997, the Committee directed that general reductions be taken across each program, project and activity. What was the magnitude of the fiscal year 1997 general reduction and explain how this was implemented?
Answer. As directed by the Congress, the agency applied general reductions totaling \$4.8 million in fiscal year 1997. This was implemented through an across-the-board reduction of all research specific projects.

OBLIGATIONS FOR NEW CROPS AND PESTS

Question. Provide for the record fiscal year 1996 obligations incurred and your current fiscal year 1997 funding estimates for the following areas of research: canola, hops, kenaf, guayale, Lesquerella, and sunflowers. Similarly, provide the Committee with information on the pests: bollworm, boll weevil, whitefly, karnal bunt, fire ant, and gypsy moth.
Answer. Obligations incurred for fiscal year 1996 and fiscal year 1997 estimated funding for crops and pest research are provided as follows:

CROPS AND PEST RESEARCH

	Fiscal year—	
	1996 obligations	1997 funding
<i>Crops:</i>		
Canola	\$188,867	\$147,400
Hops	374,114	388,200
Kenaf	1,328,338	1,391,700
Guayule	621,617	567,700
Lesquerella	589,801	584,900
Sunflower	2,788,706	2,483,600
<i>Pests:</i>		
Boll Worm/Corn Earworm	5,242,793	4,532,100
Boll Weevil	1,897,062	1,758,300
Whitefly	5,480,163	5,276,500
Karnal Bunt	348,267	218,100
Fire Ant	1,194,834	1,159,400
Gypsy Moth	2,353,078	1,620,600

CONTRACTS

Question. What are the total obligations for contractual services in fiscal years 1995 and 1996 and what is estimated in fiscal year 1997? Please specify amounts in support of research and those in support of management.
Answer. The total obligations for contractual services in fiscal year 1995 was \$60,269,044. Of this total, \$59,970,486 was obligated in support of research and \$298,558 was obligated in support of management.
The total obligations for contractual services in fiscal year 1996 was \$61,377,791. Of this total, \$61,191,791 was obligated in support of research and \$186,000 was obligated in support of management.

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The total estimated obligations for contractual services in fiscal year 1997 is \$53,000,000. Of this total, \$52,820,000 is estimated for support of research and \$180,000 is estimated in support of management.

Question. Please indicate A-76 contract agreements in effect, by location, the funding, and when they were implemented.

Answer. This information is detailed as follows:

Location	Fiscal year 1997 funding	When implemented
Philadelphia, PA	\$2,286,857	May 1982.
New Orleans, LA	1,557,458	July 1982.
Peoria, IL	2,400,000	September 1982.
Athens, GA	1,570,705	July 1983.
Beltsville, MD	500,000	April 1985.
Albany, CA	1,823,358	June 1988.
Orient Pt., NY	5,491,132	February 1991.

Question. How many full-time equivalents are represented through contractual services in ARS?

Answer. This information is detailed as follows:

Location	Facility support FTE	Scientist support FTE	Research support FTE
San Francisco, CA	22.0	.....	.....
Philadelphia, PA	38.0	.....	.....
Orient Point, NY (Plum Island)	87.0	.....	.....
Boston, MA	15.0	39	171
Athens, GA	34.0	.....	.....
New Orleans, LA	40.2	.....	.....
Albany, CA	28.0	.....	.....
Peoria, IL	43.6	.....	.....
Total	307.8	39	171

Question. Identify the research contracts and agreements entered into by ARS for fiscal year 1996 by recipient and funding.

Answer. Research contracts for fiscal year 1996 were:

Contractor	Contract amount (annual)
Tufts University, Boston, MA	\$11,771,000
Westat, Inc., Rockville, MD	4,220,000

Answer. Agreements for fiscal year 1996 were:

Cooperator	Amount
A. Duda & Sons, Inc., Salinas, CA	\$3,000
Agriculture and Agri-Food Canada Research Station, Summerland, Canada	20,000
Alabama Agri and Mech College, Normal, AL	12,500
Alcorn State University, Lorman, MS	488,262
Arkansas Children's Hosp., (Univ of AR) Little Rock, AR	1,646,400
Auburn University, Auburn, AL	71,000
Baylor University, Waco, TX	15,000
Brigham Young University, Provo, UT	25,440
Carrington Agri Expt Station, Carrington, ND	6,375
Catholic University, Washington, DC	65,000
Central Oregon Expt Station, Redmond, OR	27,425
Clemson University, Clemson, SC	41,000
Colorado State University, Ft. Collins, CO	609,500
Conservation Technology Information Center, W. Lafayette, IN	6,500
Cornell University, Ithaca, NY	734,435
Crow Valley Livestock Coop. Inc., Fort Collins, CO	18,000
Delta State College, Cleveland, MS	25,000
Drexel University, Philadelphia, PA	20,000

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<i>Cooperator</i>	<i>Amount</i>
Duke University, Durham, NC	70,721
East Carolina University, Greenville, NC	4,884
East Central State College, Ada, OK	11,500
East Tennessee State University, Johnson City, TN	5,000
Farm Service Cooperative, Council Bluffs, IA	16,065
Florida Agri and Mech University, Tallahassee, FL	5,125
GA Federal State Inspection, Service, Albany, GA	139,069
Gail G. Harrison, Thousand Oaks, CA	10,000
George Washington University, Washington, DC	2,640
Georgia Coastal Plain Expt, Station, Tifton, GA	60,000
Hawaiian Sugar Planter's Assn., Aiea, HI	569,587
Heartland Co-op, Slater, IA	70,955
Howard University, Washington, DC	37,000
Illinois Agricultural Expt Station, Urbana, IL	57,000
Institute of Microbiology and Virology, Almaty, Kazakhstan	5,000
Institute for Technical Development, NSTL, MS	70,000
Instituto De Ecologia, Xalapa, MX	20,000
Inta—Insectario de Invest., Castellar, AR	12,500
International Inst. of Biological Control, Ascot, England	30,000
International Maize and Wheat Improv Ctr, Mexico City, MX	77,000
Iowa State University, Ames, IA	142,960
John Hopkins University, Baltimore, MD	94,084
Kansas State University, Manhattan, KS	274,667
Lake Chelan Producer Association, Chelan, WA	130,000
Louisiana State University, Baton Rouge, LA	146,650
LSU Medical Center, Shreveport, LA	20,000
Maryland Dept. of Agriculture, Annapolis, MD	50,000
Memphis State University, Memphis, TN	12,000
Mercer University, Atlanta, GA	3,000
Michigan State University, East Lansing, MI	250,650
Ministry of Agriculture, British Columbia	2,000
Miss Agri and Forestry Exp Station, Mississippi State, MS	879,006
Mississippi State University, Mississippi State, MS	1,080,650
Missouri Botanical Garden, St. Louis, MO	5,960
Montana State University, Bozeman, MT	874,500
New Mexico State University, Las Cruces, NM	687,384
New York Agriculture Expt Station, Geneva, NY	111,292
North Carolina State University, Raleigh, NC	976,305
North Central Agri Expt Station, Grand Rapids, MN	132,353
North Dakota State University, Fargo, ND	215,606
Ohio State University, Wooster/Columbus, OH	343,790
Oklahoma State University, Stillwater, OK	144,500
Oregon State University, Corvallis, OR	479,375
Pennington Biomed Res Ctr (LSU), Baton Rouge, LA	340,909
Pennsylvania State University, University Park/Biglerville, PA	87,596
Purdue University, West Lafayette, IN	708,795
Rio Farms, Inc., Edcough, TX	17,500
Rodale Institute Research Ctr (PSU), Kutztown, PA	324,523
Rutgers University, New Brunswick, NJ	98,228
Sam Houston State University, Huntsville, TX	108,000
Southeastern University, Durant, OK	5,000
Southern Univ and A&M College, Baton Rouge, LA	340,909
Texas A&M University, College Station, TX	1,064,549
Texas Tech University, Lubbock, TX	160,500
The Holden Arboretum, Mentor, OH	20,726
Tulane University, New Orleans, LA	25,000
Tuskegee University, Tuskegee, AL	15,000
Universidad Nacional De La Plata, La Plata, AR	12,000
University of Alaska, Palmer, AK	6,000
University of Arizona, Tucson/Yuma, AZ	309,129
University of Arkansas, Fayetteville/Pine Bluff, AR	456,683
University of California, Davis/Berk/Parlier/Riverside, CA	2,246,984
University of Connecticut, Storrs, CT	80,000
University of Delaware, Newark, DE	4,500
University of Florida, Gainesville/Lake Alfred, FL	1,603,712
University of Georgia, Athens/Tifton, GA	377,516
University of Hawaii, Honolulu, HI	1,507,317

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<i>Cooperator</i>	<i>Amount</i>
University of Houston, Houston, TX	15,168
University of Idaho, Moscow/Aberdeen, ID	162,369
University of Illinois, Urbana/Champaign, IL	470,691
University of Maine, Orono, ME	35,721
University of Maryland, College Park, MD	778,207
University of Maryland, Eastern Shore, Princess Anne, MD	6,000
University of Massachusetts, Amherst, MA	10,000
University of Michigan, Flint, MI	9,000
University of Minnesota, St. Paul, MN	435,182
University of Mississippi, University, MS	1,568,227
University of Missouri, Columbia, MO	685,754
University of Nebraska, Lincoln/Scotts Bluff, NE	749,500
University of Nebraska East C, Lincoln, NE	12,000
University of New Orleans, New Orleans, LA	18,700
University of North Carolina, Chapel Hill, NC	38,000
University of North Dakota, Grand Forks, ND	28,850
University of Oklahoma, Norman, OK	27,000
University of S W Louisiana, Lafayette, LA	37,449
University of South Carolina, Columbia, SC	10,000
University of Southern Mississippi, Hattiesburg, MS	340,909
University of Tennessee, Knoxville, TN	149,863
University of Texas, Houston, TX	38,852
University of Vermont, Burlington, VT	45,000
University of Wisconsin, Madison, WI	720,934
University of Wyoming, Laramie, WY	48,747
Utah State University, Logan, UT	156,000
Virginia Military Institute, Lexington, VA	54,000
Virginia Poly Inst and State University, Blacksburg, VA	100,000
Washington State University, MtVm/Prosser/Pullman/Wenatchee, WA	859,293
Yale University, New Haven, CT	384,485

CONTRACTS

Question. ARS receives significant reimbursements from APHIS, CSREES, ERS, NASS, and FSIS. Explain the use of the funds.

Answer. The reimbursements from APHIS are for the support agreement at Plum Island Animal Disease Center. Research is also conducted on silverleaf whitefly and water quality program activities. Funds received from FSIS are used to develop dosimetry standards for radiation processing of food and mathematical models to predict levels of bacterial pathogens in food. ARS reimbursable agreements with CSREES, ERS and NASS are primarily for support of the Administrative and Financial Management unit which provides personnel, contractual and financial management services to the Research, Education and Economics agencies.

Question. ARS receives significant reimbursements from other Federal agencies: HHS, EPA, DOE, and DOI. Explain the research performed for these agencies.

Answer. The research performed for HHS includes anti-microbial susceptibility testing of veterinary origin salmonella isolates; effect of nitrofurazone in dairy cattle; nutrient content of foods in the American diet; methods for food components associated with reduced cardiovascular disease risk and fumonisin exposure, serum sphingolipids and esophageal cancer relationships. The research performed for EPA includes the comparison of remediation and assessment of contaminated soils, water and air in agricultural watersheds and the development and evaluation of an aerial video imaging system for natural resource assessment. The research performed for DOE includes the metabolic regulation of plant hormones; investigation of heavy bioaccumulation in plants grown on metal-polluted soils; genetic variation among switchgrasses for agronomic traits; forage quality and biomass fuel production; and control of sucrose biosynthesis in plants by protein phosphorylation. The research performed for DOI includes the application of modeling technology in rangeland resource management and improved water quality in Mississippi Delta watersheds and lakes.

Question. ARS received funding from State and other sources: California; Cotton Incorporated; International Life Science; Florida and North Carolina. Explain the use of these funds.

Answer. ARS funding received from the State of California were used to develop a means for controlling aquatic weeds in the Sacramento Delta, and to manage aquatic weeds in California waterways. Research was also performed to develop systems and sprays for monitoring and suppressing fruit fly populations, as well as mex and medfly. The funding that ARS received from Cotton Incorporated were

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used in the identification and chemical characterization of insect honeydews on sticky cotton; development of an integrated resistance management program for the silver leaf whitefly in AZ and CA; and methods for improving the handling characteristics of fuzzy cottonseed. The funding that ARS received from International Life Science Institute were used in the controlled diet human studies assessing dietary fatty acid impact on blood lipids and hemostasis. The funding that ARS received from Florida were used in the study of biological control agent development for the Australian Malaleuca and the management of bio-agents for hydrilla, pista and water hyacinth. The funding that ARS received from North Carolina were used in the evaluation of alternative constructed wetland systems for swine wastewater treatment and management practices to reduce nonpoint source pollution.

ARS APPROPRIATIONS LAW

Please describe your activities and funding obligations in fiscal year 1996 under the provisions limiting construction, alteration, repair and improvements of buildings in the ARS appropriation language:

Question. The cost of constructing any one building shall not exceed \$250,000.

Answer. No obligations were made by ARS in fiscal year 1996 under this unlimited building program limitations.

Question. Head houses and greenhouses which shall be limited to \$1,000,000.

Answer. No obligations were made by ARS in fiscal year 1996 under the headhouse and greenhouse building program limitations.

Question. Ten buildings to be constructed or improved at a cost not to exceed \$500,000 each.

Answer. No obligations were made by ARS in fiscal year 1996 under the ten building program limitations.

Question. How were these activities funded?

Answer. No projects required funding by ARS under these provisions in fiscal year 1996.

NATIONAL ARBORETUM

Question. Please describe the projects and programs conducted at the National Arboretum.

Answer. The National Arboretum has a diversified program that includes Research, Gardens, and Education functions. The Research program develops new and improved trees, shrubs and flowers to meet the needs of a rapidly expanding market for floral and nursery products and to satisfy public demand. The Gardens program is responsible for developing and maintaining public display gardens on the 440 acre site in Washington, D.C. The Education program conducts a wide ranging program of public education in plant conservation, environmental stewardship and the application of principles of integrated pest management in public and private gardens.

Question. What is the resource distribution to these programs?

Answer. The National Arboretum budget in fiscal year 1997 is \$7.274 million. Resources are distributed as follows: Research program—\$4.616 million; Garden program—\$1.976 million; Education program—\$.682 million.

Question. In fiscal year 1997, Congress appropriated an increase of \$200,000 for floriculture/horticultural research. How are these funds being implemented?

Answer. The funds are supporting research on genetic engineering of roses for disease resistance; tissue culture of crape myrtle to develop a tissue regeneration procedure for genetic engineering; and studies on impatiens necrotic spot virus and the engineering of virus-resistant impatiens.

Question. What is the status of replacing and modernizing the water lines at the National Arboretum? When will this be completed? What is the total estimated cost for this project?

Answer. The Arboretum has received and obligated \$2.9 million through fiscal year 1997 for the replacement of the irrigation water system. These funds have been used to replace the main irrigation lines throughout the National Arboretum. As part of this replacement project, three wells were drilled and tied into the system. (This project does not address replacing and automating the lateral irrigation lines off the mains.)

Upon activating the wells, it was determined that the quality of the well water was not adequate for irrigation purposes. A study is now underway. ARS will evaluate this study carefully to determine the economic feasibility of building this treatment facility rather than staying on District of Columbia water. Preliminary estimates put the cost of installing a treatment system at approximately \$1.75 million and estimate 18 months to construct. If this course of action is chosen, the total cost for the new water system at the Arboretum will total about \$4.65 million.

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Question. How much money does the Arboretum commit to overall renovation and modernization annually? Describe the use of these funds in fiscal years 1995–1997.

Answer. The Arboretum commits \$739,633 annually to renovation and modernization. The major projects these funds were used for are as follows:

	<i>Amount</i>
Fiscal year 1997:	
Update Master Plan	\$300,000
Design renovation of Herb Garden Paths	60,000
Design Bonsai Complex Courtyard	60,000
Replace directional and traffic signs	30,000
Design exterior lighting	115,000
Design renovation of Lath Facility	30,000
Trim and remove trees	25,000
Design renovation of Building 015	55,000
Design renovation of Asian Valley Paths	40,000
Fiscal year 1996:	
Replace directional and traffic signs	87,008
Phase V, Water System replacement	134,292
Repairs to Bonsai Museum	53,536
Repairs to Chinese Pagoda	57,080
Replace Auditorium roof	128,980
Install irrigation system	66,467
Trim and remove trees	29,341
Install Fibre Optics cable	41,220
Renovate hallways, Administration Building	19,727
Renovate heading systems, Bldgs. 013/014	34,052
Fiscal year 1995:	
Phase IV, Water System replacement	203,488
Trim and remove trees	24,000
Replace Greenhouse cooling/ventilation	129,425
Replace drainage system, Gotelli Collection	41,820
Restoration Projects	134,144
Repairs to Bonsai Museum	43,253
Replace boiler, Bldg. 012	18,945

CENTERS OF EXCELLENCE

Question. For fiscal year 1998, identify the proposed ARS Centers of Excellence, where they are located and their funding. Describe the programs at these Centers.

Answer. The ARS Centers of Excellence, at 1890 Land Grant University locations and fiscal year 1998 funding are as follows:

ARS 1890's Centers of Excellence

<i>Location</i>	<i>Fiscal year 1998 estimate</i>
Delaware State University, Dover, Delaware	\$250,000
Langston University (proposed), Langston, Oklahoma	200,000
Alcorn State University, Lorman, Mississippi	166,000
Tennessee State University, McMinnville, Tennessee	491,000
University of Arkansas, Pine Bluff, Arkansas	373,000
University of Maryland Eastern Shore at Princess Anne, Maryland	246,000
Total	1,726,000

The research program is as follows:

Dover: Aquaculture Products.—Rapid methods are needed for monitoring the microbial profile of aquaculture processes and products to assure safety. Develop rapid detection and monitoring methods for pathogens and spoilage microorganisms in aquaculture process and products and to improve purging efficiency in order to prevent human illness.

Langston: Grazing lands.—Determine impact of pasture design and grazing animals on quality of water emerging from watersheds, and develop pasture management systems that will optimize water quality and productivity in the semi-arid U.S.

Lorman: Swine Production.— Development of an efficient system for production of meat-type pigs in the southern United States. The objectives are to: evaluate breeds of swine that have good reproductive performance and produce high quality lean carcasses in the southern U.S.; develop feeding systems to obtain efficient con-

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version of feeds at minimum cost; and to develop a system to transfer this new technology to local producers.

McMinnville: Horticulture.—Develop new and improved ornamental trees and shrubs for the U.S. nursery industry. Develop basic genetic and physiological information related to nursery crop species. Reduce pesticide use and fertilizer run-off during nursery crop production. Develop improved nursery crop propagation methods. Evaluate existing germplasm or ornamental trees and shrubs for pest resistance, tolerance of environmental stress, and superior ornamental value.

Pine Bluff: Aquaculture.—Evaluate alternatives and develop new components of aquaculture production systems to improve efficiency of freshwater fish farming including cultural and processing methods to enhance quality.

Princess Anne: Food Safety.—Identify and conduct research on critical control points affecting the microbiological contamination of poultry from grow-out through final consumer preparation, and to develop interventions and quantitative risk models to ensure food safety.

Question. What are the Agency's long-term plans with respect to staffing these Centers?

Answer. ARS' long-term plans with respect to staffing these Centers is as follows:

Dover, Delaware: One scientist will be hired with funds appropriated in fiscal year 1997. At the current level of funding, there are no plans to expand beyond one scientist.

Langston, Oklahoma: Proposed Center of Excellence in fiscal year 1998. Plans are to use funds, if appropriated in fiscal year 1998, for a cooperative undertaking utilizing cooperative university staff. We do not plan to add any permanent staff.

Lorman, Mississippi: At present only temporary staff have been hired to support the project. At the current level of funding, we do not plan to add any permanent staff.

McMinnville, Tennessee: Current staffing includes an ARS Research Geneticist and a Research Horticulturist is being recruited.

Pine Bluff, Arkansas: One ARS scientist is now in place. A second scientist is currently being recruited with additional funds appropriated in fiscal year 1997. At the current funding level, there are no plans to expand beyond two scientists.

Princess Anne, Maryland: ARS has no plans at present to expand beyond the one scientist and support staff currently in place.

Question. Describe the working relationship and accomplishments resulting from these collaborations.

Answer. The working relationship and accomplishments resulting from these collaborations are as follows:

Dover, Delaware: The program is just being developed. The combination of physical resources (facilities, laboratory space, and water resources of the Microbial Food Safety Unit, at ARS' Eastern Regional Research Center, and the Aquatic Ecology/Aquaculture Research Program at Delaware State University) will allow the conduct of important aquaculture food safety research that neither organization could carry out independently.

Langston, Oklahoma: The anticipated outcome of the proposed cooperative endeavor between ARS' El Reno Grazing Lands Research Laboratory will result in new research information: (1) impacting pasture design and grazing animals on quality of water emerging from watersheds, and (2) the development of pasture management systems that will optimize water quality and productivity in the semi-arid U.S.

Lorman, Mississippi: A new physical facility is being developed that will permit the housing of boars that are needed to initiate an artificial insemination program. Alcorn State University staff members have received training in ARS' laboratories on the technologies associated with the use of implementing a program on artificial insemination in swine. Selected genetic stock (females) have been purchased and are now part of the Alcorn project. ARS and the Alcorn State University have worked together in developing the plan that was used to select the genetic stock that will be used in the project. The overall plan for the implementation of the long term project on swine is now being developed by Alcorn State University and ARS scientists. The progress to date has been good. The project has led to considerable interactions between Alcorn State University and ARS scientists. More importantly, the project has outstanding potential to improve swine production systems for local producers that at a later date can be transferred to other producers in the south.

McMinnville, Tennessee: An excellent collaboration has been established between Tennessee State University, ARS and the Tennessee Nursery industry. This partnership has resulted in jointly establishing research objectives including breeding for resistance to dogwood anthracnose and the development and use of natural products for pest and disease control on nursery crops.

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Pine Bluff, Arkansas: The ARS program is cooperative with and complementary to the strong aquaculture research and extension program already in place at the University of Arkansas at Pine Bluff (UAPB) (five Ph.D.-level scientists and four M.S.-level staff members have research appointments in the UAPB's Aquaculture/Fisheries Program). UAPB and ARS share facilities, space and water resources and cooperate on research related to aquaculture engineering, water quality, and systems technology. The cooperation results in substantial benefits to both ARS and UAPB in terms of cooperative research, technology transfer (through UAPB's extension activities), and training and recruitment of minority scientists.

Princess Anne, Maryland: A survey of growth characteristics of various *Salmonella* isolates obtained from poultry operations in the Delmarva was completed. The results of this survey will provide the basis for developing predictive models to estimate changes in *Salmonella* numbers on poultry as it moves through the farm to fork chain. The ARS laboratory uses University of Maryland at Eastern Shore (UMES) laboratory space and UMES scientists and students provide support for the research program. Thus, working relationships for this program are close with the UMES, as well as the Eastern Regional Research Laboratory of the ARS at Wyndmoor, Pennsylvania, and the combined expertise provides for a strong research program.

TECHNOLOGY TRANSFER

Question. Please describe your activities in the area of technology transfer. How many licenses, patents and CRADA's were entered into in fiscal year 1996? How do these statistics compare to fiscal year 1994? What is your activity to date in fiscal year 1997?

Answer. There are a variety of activities associated with technology transfer in ARS. There are currently eight individuals in field locations functioning as full or part time Technology Transfer coordinators. Their duties include working closely with ARS scientists to identify developing technologies of potential commercial interest, identifying specific strategic partners, and negotiation of a variety of agreements including CRADA's, Trusts, Reimbursable Cooperative Agreements, Memorandums of Understanding, Material Transfer Agreements, and Confidentiality Agreements. Domestic and foreign patents and licenses continue to be an important part of technology transfer activities. Each year OTT staff members participate in more than 30 technology transfer meetings and targeted trade shows where they exhibit materials and/or give presentations on new technologies available for licensing, examples of past successes, and how to develop partnership with ARS. These events also provide a venue for farmers, industry representatives, consumers, and end users to inform ARS of their specific problems and needs. In addition, OTT staff members also develop and conduct workshops targeting specific industries who are potential strategic partners. Other recent efforts to enhance and speed the transfer of ARS technology have focused on electronic access via the OTT home page, and closer working relationships with the Information Staff, and the National Agricultural Library. The area or rural development has received special emphasis with efforts ranging from active participation in the USDA Rural Development Action Team, closer ties with the SBIR program, AARC, and BRDC, to the development of agreements with several state Economic Development Agencies to foster closer working relationships at the local level. In fiscal year 1996, ARS filed 76 patent application, while 53 ARS patents were issued by the Patent and Trademark Office. Also in fiscal year 1996, ARS licensed 25 inventions to the private sector, while entering into 81 Cooperative Research and Development Agreements. In fiscal year 1994, ARS filed 40 patent applications, while 36 patents were issued by the PTO. Also in fiscal year 1994, ARS licensed 9 inventions and negotiated 93 CRADA's. For fiscal year 1997, to date, ARS has filed 19 patent applications, while 20 have been issued by the PTO. ARS licensed 11 inventions and negotiated 45 CRADA's as of April 29, 1997.

Question. How does ARS interface with Federal and State Extension activities? How effective is this relationship?

Answer. The application of new technologies to complex modern farming systems is becoming extremely complicated. A key component in the successful transfer of new technologies to producers and users is to provide training and education in the diagnosis of problems, selection of solutions, and method of application. In addition, a new system of independent crop consultants is involved in the rapid dissemination of new technical developments that are effective, economically feasible, and environmentally friendly. ARS is heavily dependent on Federal and State Extension services to achieve this vital element of training and education of all interested parties. This relationship has been highly effective in the continued success of American ag-

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riculture. The interface between ARS and Extension occurs in many ways. Numerous ARS units are co-located at Universities where the close working relationship among ARS scientists and their University colleagues leads to a daily transfer of information. Furthermore, many new ARS technologies undergo pilot tests and demonstration phases in which extension personnel are intimately involved. Two recent examples where ARS/extension interactions have been critical for progress are release of predatory wasps for augmentive biocontrol of the cotton boll weevil in West Texas, and release of a beetle for biocontrol of the noxious weed melaleuca in Florida.

Question. Describe major accomplishments through the CRADA program?

Answer. Since passage of the Technology Transfer Act of 1986, ARS has entered into more than 670 CRADA's with companies and other entities, resulting in new products ranging from edible coatings to extend shelf life of fruits and vegetables, new plastic products from renewable resources, new diagnostic tests for toxins and food safety microorganisms, to novel and more effective pest control and crop protection. Through the CRADA program, ARS is leveraging its resources by encouraging domestic companies to partner in high-risk unproven technologies. Such partnerships permit these companies and the U.S. to remain globally competitive, while delivering improved and environmentally-friendly products to farmers and consumers in a timely manner. In some cases, the CRADA program has been instrumental in the creation of new businesses.

Some examples include:

CRADA's with EMBREX, Inc. of Research Triangle Park, North Carolina, are leading to the development of several new poultry vaccines, such as the recently registered Bursaplex vaccine to combat infectious bursal disease in poultry. EMBREX Inc., a start-up company with two employees in 1985, today employs more than 120 people, with international operations in London, where it has entered European and African markets. The company is also working on similar arrangements with the Japanese to enter the Asian market. EMBREX has seven research and development agreements on techniques ranging from poultry protection against avian coccidiosis to *Salmonella*.

A CRADA with Handley Yosemite Farms of Turlock, California is evaluating molding technologies to develop value-added restructured fruit products. A Cooperative Research and Development Agreement (CRADA) is assisting in commercial development of shelf-stable products that are convenient and nutritious to consumers, while offering growers and processors new markets for fruits, such as apricots, peaches, grapes, strawberries and oranges. Potential markets for these products include the confectionery and health food markets.

A stable, nonseparable composition made from starch and oil developed by ARS led to three CRADA's for uses in food and nonfood applications. A CRADA with the Union Camp Corporation of Wayne, New Jersey, was used to develop environmentally friendly adhesives, glues, and coatings. The technology could capture a significant share of the \$100 million per year adhesive and coating market for wood-based products. A CRADA with Opta Food Ingredients of Bedford, Massachusetts used the technology in a variety of food applications, such as fat replacements. The total market for fat replacements and food ingredients exceeds more than \$300 million per year. The starch-oil combination also attracted the attention of Seedbiotics, Inc. of Caldwell, Idaho, which in partnership with ARS developed a way to encapsulate fertilizers and biological pesticides and herbicides in compositions that can be used to coat seeds to enhance seedling development.

A CRADA with Demeter Biotechnologies Ltd. of Research Triangle Park, North Carolina is developing technologies to control bacterial diseases of channel catfish. ARS researchers are investigating the potential of synthetic lytic peptides to control specific bacterial diseases. Losses from these diseases in commercial production range from 20 percent with mild infections to 95 percent with severe infections. Enteric septicemia, caused by the bacterium *Edwardsiella ictaluri* is responsible for about 30 percent of all channel catfish disease losses in the southeastern United States. Research results will be used to develop disease-resistant stocks of channel catfish for release to commercial catfish farmers.

A CRADA with Zellweger Uster, Inc. of Knoxville, Tennessee, is incorporating a new moisture sensor into the company's system of measuring cotton fiber quality for the international cotton industry. The moisture sensor was originally developed for the cotton ginning industry, but also has applications in other industries, such as textile processing and marketing classification of cotton. For classification, some of the measured fiber qualities such as strength and micronaire are strongly influenced by the fiber moisture. The mutual interest of ARS and Zellweger Uster is to validate a moisture measurement system which can be commercialized and introduced into the cotton industry.

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A CRADA with the Whirlpool Corp. of Benton Harbor, Mich. is evaluating fabric damage during laundering of cotton fabric. The objectives of this project include minimizing fabric damage, lint generation and cross contamination of lint between garments during laundering of cotton fabric. ARS scientists are studying the effects of moisture, heat, duration and extent of tumble drying and laundering additives on fiber structure and morphology of fabric by light and electron microscopy and image analysis. In addition, the partnership is addressing the problem of lint production and cross contamination between garments. The results of the CRADA will assist Whirlpool, a major manufacturer of laundering machines, in improving their laundering machines, primarily tumble dryers.

ARS PERSONNEL

Question. The fiscal year 1998 budget proposes a 186 reduction in ARS full-time equivalent positions (FTE's) from 7,800 in fiscal year 1997 to 7,614, the fiscal year 1996 level. How will this reduction be realized, by location? How many scientists will ARS lose as a result of this proposed reduction? What number of staff year reductions will be taken from headquarters?

Answer. The 7,800 FTE authorized for fiscal year 1997 represents an increase over actual FTE used in fiscal year 1996. The proposed allowance for fiscal year 1998 is equal to the fiscal year 1996 level. ARS currently is working toward increasing the number of research scientists to 2000 from the current level of 1810 by changing the mix of administrative, technical, clerical and post doctoral support positions. These changes will be accomplished through normal attrition in headquarters and the field offices. ARS does not anticipate losing any scientists due to authorized ceiling allocations. Any FTE changes between fiscal year 1997 and fiscal year 1998 which occur will be managed, if necessary, through normal attrition. Until actual FTE's are reduced reductions in staffing cannot be broken out by location.

Question. Update the Committee on the average age of ARS scientists. Compare this to that of 1990 and 1985.

Answer. ARS does not have employment statistics for the years prior to fiscal year 1986. The current average age of ARS scientists on-board is 50.8. At the end of fiscal year 1990 the average age was 48.33. The average age was 47.78 at the end of fiscal year 1986.

Question. How many scientists are currently on-board?

Answer. There are currently 1,810 permanent ARS scientists on-board.

Question. How many were on-board at the beginning of fiscal years 1996 and 1995?

Answer. In the beginning of fiscal year 1996, there were 1,906 permanent ARS scientists on-board. At the start of fiscal year 1995, there were 1,969 permanent ARS scientists on-board.

Question. What is the current scientist to laboratory capacity ratio in ARS? Has this changed over the past 10 years? For each of the following locations, list the current capacity and scientists on board: Beltsville, MD; Utilization Centers at Peoria, IL; Albany, CA; Philadelphia, PA and New Orleans, LA; and NADC, Ames, IA.

Answer. The current scientist to laboratory capacity ratio in ARS is about 80 percent. This ratio has not changed significantly over the past 10 years. The current capacity and scientists on-board for specific locations requested are as follows:

Location	Capacity	Scientists	Ratio (percent)
Beltsville, MD	600	512	85
Peoria, IL	164	134	82
Albany, CA	208	166	80
Philadelphia, PA	154	121	79
New Orleans, LA	127	90	71
NADC, Ames, IA	160	106	66
Total	1,413	1,129	80

Question. ARS' actual staff years have come in well below its authorized ceilings the past two years. What do you anticipate in fiscal year 1997?

Answer. Current staffing and plans indicate that ARS' full-time equivalent (FTE) usage for fiscal year 1997 will be an estimated 300 below the ceiling of 7,800.

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Question. Please identify the number of personnel defined as management in ARS in Washington headquarters and in the field.

Answer. The number of personnel defined as ARS management is 11. These positions are located in Washington headquarters.

Question. How has this changed since 1990?

Answer. In fiscal year 1990, ARS had 13 management positions. The total increased to 16 in fiscal year 1991 due to the expansion of the National Program Staff from two program areas to five. Near the end of fiscal year 1996 the total decreased to 11 when activities under the Global Warming Staff were reassigned to the National Program Staff.

Question. What is the makeup and diversity of the ARS work force? How does it compare to 1990?

Answer. The chart below identifies the diversity of the ARS work force for fiscal year 1990 and the current ARS work force. The numbers are expressed as percentages of the total work force based on end-of-year employment data.

Race	Percent—	
	Fiscal year 1990	Current work force
Asian/Pacific Islanders	4	3
Black	8	9
Hispanic	3	4
Native American		1
White	85	83
Total	100	100

Question. Provide the Agency level of ARS FTE's for 1985, 1990, and 1996. Provide scientific, support, and management FTE's for these same years.

Answer. ARS FTE's for 1985, 1990, and 1996 are as follows:

Fiscal year	FTE's
1985	8,112
1990	8,207
1996	7,614

FTE information by specific employment categories is not available. However, on-board end-of-year employment by major position categories for fiscal year 1986, 1990 and 1996 is listed below. The categories are defined as follows:

Professional.—Occupations which require knowledge or learning acquired through education or training equivalent to a bachelor's degree or higher, with a major study in a specialized field. Examples include: entomologists, geneticists, soil scientists, chemists, etc.

Technical.—Occupations typically associated with and supportive of a professional position that requires extensive practical knowledge. Examples include: Biological technicians, engineering technicians, physical science technicians, and office automation clerks.

Administrative/Clerical.—Occupations which require analytical ability, judgment, discretion, and personal responsibility in applying principles, concepts or practices to fields of administration or management, as well as positions which involve structured work in support of an organization. Examples include: computer specialists, administrative officers, personnel specialists, management and program analysts.

Wage Grade/Other.—Occupations involving the trades, crafts, or skilled, unskilled or semiskilled manual labor and white collar student trainee positions. Examples include: animal caretakers, maintenance mechanics, and biological science student trainees.

Group	Fiscal year—		
	1986	1990	1996
Professional	3,420	3,565	3,063
Technical	2,593	2,791	3,030
Administrative/Clerical	1,461	1,439	1,089

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Group	Fiscal year—		
	1986	1990	1996
Wage Grade/Other	1,214	873	764
Total ¹	8,688	8,668	7,946

¹ Total represents on-board, end-of-year employment by major position categories as shown.

AQUACULTURE

The ARS report to the Committee on warmwater aquaculture research facilities and programs indicates that the continued growth and competitive position of the U.S. aquaculture industry in a global marketplace will be directly related to the resources invested in research and technology development.

Question. What level of resources are included in the fiscal year 1998 request to enhance the growth and competitiveness of U.S. aquaculture? How does this compare to the federal resources devoted to this purpose for fiscal year 1997?

Answer. The Department's fiscal year 1998 budget request includes \$8,572,400 in aquaculture funding for the Agricultural Research Service. Fiscal year 1997 funding for aquaculture in the Agricultural Research Service is \$10,184,800.

Question. The report indicates that the ability of ARS' research program in support of the warmwater aquaculture industry will be significantly improved with the completion of programs and facilities still under development. With respect to each of the locations where warmwater aquaculture research is conducted, which programs and facilities are still under development? What staffing and funding will be required for the programs and facilities at each of these locations once they are fully developed?

Answer. Warmwater aquaculture research locations still under development, with required staffing and funding at each location, are as follows:

National Warmwater Aquaculture Research Center, Stoneville, Mississippi.—Total program funding of \$5.1 million is projected to support a total of 17 research scientists, 11 of which would be Mississippi Agricultural and Forestry Experiment Station scientists and 6 of which would be ARS scientists. With the current funding level of \$3.2 million, an additional \$1.9 million is needed to support research programs in catfish production practices, nutrition, water quality/quantity, genetics and breeding, disease diagnosis and control, and food processing.

Fish Diseases and Parasites Research Laboratory, Auburn, Alabama.—Total program funding of \$1.74 million is projected to support a total of 6 research scientists. With the current funding of \$0.84 million, an additional \$0.9 million is needed to support research programs in disease diagnosis, and control, immunology, and vaccines development to solve fish health programs in aquaculture.

National Aquaculture Research Center, Stuttgart, Arkansas.—Total program funding of \$3.59 million is projected to support a total of 11 research scientists. With the current funding of \$1.24 million, an additional \$2.35 million is required to support research programs in therapeutics evaluations and production systems for the aquaculture industry.

Aquaculture Systems Research Unit, Pine Bluff, Arkansas.—A total of \$0.5 million is projected to support a total of 2 research scientists. With the current funding of \$0.37 million, an additional \$0.13 million is needed to support aquaculture engineering-related research programs in aquaculture pond management practices, postharvest procedures, and value-added products.

Question. The report indicates that during fiscal year 1997, a thorough review of the Stuttgart National Aquaculture Research Center will be undertaken to determine the specific directions of future research programs. When will this review be complete? Please submit the results of this review to the Committee.

Answer. We expect that the review will be completed by September 30, 1997. The results of the review will be submitted to the Committee.

PROJECT TERMINATIONS

Question. ARS is recommending a number of project terminations to fund "high priority research." Why do you consider these projects, many of which impact production research, to be low priority?

Answer. ARS considers all research within its mission to be important; however, in situations in which there are not enough assigned funds to allocate to all required research, it becomes essential to assign priority. The President's budget provides an overall net increase of \$10 million for ARS, but also identifies \$36.5 million of new

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high priority research to undertake. Therefore, it became necessary for ARS to identify over \$26 million invested in current research activities to terminate and redirect toward these new initiatives. In an effort to objectively identify the most appropriate research to terminate, ARS developed a "Project Evaluation Guide" that focuses on an analysis of three primary factors: relevance, capacity, and impact. A careful evaluation of the Federal role is also included in the analysis. The ARS top management team applied this guide to all research projects in the Agency and achieved consensus on overall ratings. Projects that were in the lower quartile were further scrutinized. Using this process, the ARS management team selected those projects whose terminations were judged to have the least overall negative impact on agriculture from a national perspective, in relation to all other research ongoing in the Agency. The 71 projects proposed for termination were not limited to production agriculture, but represented many other areas of concern. Within the diverse ARS research portfolio, there are no "low priority" research projects; however, in times of tight budget scenarios, and required new allocations to selected program areas, difficult judgments must be made in terms of which projects are less critical.

Question. What criteria did you impose to determine the projects proposed for termination?

Answer. The criteria imposed include relevance, capacity, and impact. A careful analysis of the Federal role was also conducted. Relevance deals with the goals and objectives of a project relative to critical national or regional problems as identified by customers and stakeholders. Capacity deals with the fiscal, human, and physical resources available to support the project and meet the stated objective(s). Impact is concerned with the beneficial change(s) that have occurred or are anticipated to occur for the agriculture and food industry, scientific community, economy, society, and/or policy issues of the Nation.

Question. By location, provide a list of the proposed project terminations. How many scientists are impacted at each location?

Answer. A list of the proposed project terminations and number of scientists impacted are as follows:

PROPOSED PROJECT TERMINATIONS IN FISCAL YEAR 1998—RESEARCH PROJECT TITLE BY LOCATION, FUNDING AND STAFF YEARS

Location	Fiscal year 1997 (base) gross	Scientists
California:		
Albany:		
Flavor Optimization of Major Food Crops through Control of Metabolic Processes	\$357,600	.9
Modification of Vegetable Oils as Raw Materials for Industrial Uses	681,900	3.0
In Vitro Creation and Commercialization of High Solids Tomatoes and High-Solids, Low Sugar Potatoes	398,900	1.6
New Bacterial Polysaccharides for Food and Industry	324,200	1.5
Novel Biopolymers Based on Agricultural Sources	282,500	1.0
Biological Control of Yellow Starthistle and Other Non-indigenous Plant Pests in the Western USA	88,200	.....
Total	2,133,300	8.0
Fresno: Shallow Groundwater Management Systems for Arid Irrigated Areas		
(w/s Brawley): Irrigated Desert Research II	245,700	2.0
Total	321,000	.....
Total	566,700	2.0
Colorado: Ft. Collins:		
Global Change Research, Decision Support, Modeling, and Database Management (Extramural-CIESIN) (\$789,137 Est.)	727,500

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PROPOSED PROJECT TERMINATIONS IN FISCAL YEAR 1998—RESEARCH PROJECT TITLE BY
LOCATION, FUNDING AND STAFF YEARS—Continued

Location	Fiscal year 1997 (base) gross	Scientists
Development of Improved Cropping System Models and Technology for Sustainable Production (Extramural-Colorado State Univ.) (\$50,000 Est) (Total Agreement \$170,000 balance of \$120,000 funded from another CRIS Project in Ft. Collins)	158,400	.....
Development of a Decision Support System for Farmers and Ranchers in the Great Plains	80,000	.....
Total	965,900	.....
Florida: Gainesville: Mgt of Termites as Urban Pests in the American Pacific (Extramural-Univ of HI for Formosan Termites) (\$120,288 Est)	144,100	.....
Total	144,100	.....
Hawaii: Aquaculture Productivity Research Phase II (Extramural-All to Oceanic Institute) (\$1,434,195 Est)	1,612,400	.....
Total	1,612,400	.....
Idaho: Aberdeen: Development and Use of Molecular Techniques in Oat Enhancement	160,700	1.0
Total	160,700	1.0
Illinois:		
Peoria:		
Animal Health Consortium (shown geographically in Ames) (Extramural-BRDC) (\$834,545 Est)	919,800	.....
Exploratory Thermal Chemical Conversion of Starch to Enhance Derivatization	161,700	1.0
Enhanced Use of Plant Proteins: Identifying, Isolating and Relating Structures to Properties	577,900	2.0
Genetic Engineering of Anaerobic Bacteria for Improved Rumen Function	490,800	2.0
Total	2,150,200	5.0
Urbana:		
Reduced Herbicide Inputs for Effective Weed Management Systems to Improve Water Quality	185,700	.....
Sensors and Systems for Site-Specific Crop Management to Improve Environmental Quality (Extramural-III. Ag. Exp. Sta.) (\$32,000 Est)	229,200	1.0
Soybean Diseases	344,100	2.0
Total	759,000	3.0
Iowa: Ames:		
Limits to Digestibility and Interactions Among Quality, Growth, and Persistence of Forages	171,000	.....
Genetic Characterization of Soybean Germplasm	178,900	1.0
Total	349,900	1.0

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PROPOSED PROJECT TERMINATIONS IN FISCAL YEAR 1998—RESEARCH PROJECT TITLE BY
LOCATION, FUNDING AND STAFF YEARS—Continued

Location	Fiscal year 1997 (base) gross	Scientists
Kansas: Manhattan: Protecting Hard Red Winter Wheat from Biotic Stress	250,000	.....
Total	250,000	.....
Louisiana: New Orleans:		
Improving Sugarcane Productivity by Conventional and Molecular Approaches to Genetic Development	233,300	.....
Disease and Insect Control Mechanisms for the Enhancement of Sugarcane Germplasm Resistance	83,400	.....
Developing Integrated Weed Management Systems for Efficient and Sustainable Sugarcane Production	83,300	.....
Total	400,000	.....
Maryland: Beltsville:		
Ecologically-Based Technologies for Controlling Ixodes Scapularis and Reducing Lyme Disease (Extramural-Yale) (\$157,500 Est)	175,200	.....
Remote Sensing and Associated Technologies for Production Decisions (Extramural-Institute of Tech Develop, MS) (\$70,000 Est)	206,100	.....
Stability/Maturity/Safety of Composts and Organic Residuals: Criteria and Tests for Agriculture (Extramural-Rodale Inst.) (\$237,223 Est.) (Total Agreement \$324,523 balance of \$77,300 funded from other CRIS Projects in Beltsville and \$10,000 from ERRC)	281,700	.....
Automated Firmness Classification of Apples	378,600	1.0
Production and Evaluation of Tissue-Cultured Fruit Crops	237,900	.....
National Turfgrass Evaluation Program	55,300	.....
Genetic Modification of Soybean Inoculants to Improve Their Effectiveness	171,800	1.0
Molecular Genetics of Populations of Fungi Important in Biological Control	182,300	1.0
Reduction of Chilling Injury by Techniques Safe for Food Consumption	454,000	2.0
Total	2,142,900	6.0
Michigan: East Lansing:		
Innovation Technology to Improve the Production and Handling of Vegetables (Extramural-MI State Univ.) (\$50,000 Est)	222,200	1.0
Crop/Animal Systems to Improve Nutrient Management and Sustainability of Dairy Farms	170,800	1.0
Total	393,000	2.0
Minnesota: St. Paul: Germplasm Evaluation and Genetic Improvement of Oats and Wild Rice (Extramural-No. Central Ag Exp Sta, Grand Rapids for Wild Rice) (\$132,353 Est)		
Total	147,000	.....
Total	147,000	.....
Mississippi: Stoneville: Agronomic and Economic Evaluation of Kenaf as a Field Crop in Mississippi (Extramural-MS. St. Univ.) (\$418,019 Est)		
Total	491,500
Total	491,500

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PROPOSED PROJECT TERMINATIONS IN FISCAL YEAR 1998—RESEARCH PROJECT TITLE BY
LOCATION, FUNDING AND STAFF YEARS—Continued

Location	Fiscal year 1997 (base) gross	Scientists
Missouri: Columbia: Surface and Subsurface Hydrology for Watersheds with Limited Relief	393,200	1.0
Total	393,200	1.0
Nebraska:		
Clay Center: Influence of Gastrointestinal Neuroendocrine Peptides on Food Intake and Growth of Swine	208,400	1.0
Total	208,400	1.0
Lincoln: Biology and Control of Virus Diseases of Sorghum	143,100	1.0
Total	143,100	1.0
New York:		
Ithaca:		
Entomopathogenic Fungi as Biocontrol Agents of Pest Insects of Agricultural Crops (Extramural-Univ of Vermont for Pear Thrips) (\$45,000 Est)	50,000	.....
Agricultural Sustainability and Stress Adaptation: Role of Differential Root Development	221,100	1.0
(w/s Orono): Production Systems that Are Economically Feasible Beneficial to the Environment and Natural Resources	135,500	1.0
Total	406,600	2.0
North Carolina: Raleigh:		
Enhancement of Roasted Peanut Flavor Intensity Using Genetic Resources	285,800	2.0
Factors Responsible for Control of the Textural Properties of Processed Sweetpotato Products	217,200	1.0
Evaluation of Temperate Legumes and Warm-Season Grass Mixtures in Sustainable Production Systems	374,200	2.0
Total	877,200	5.0
North Dakota: Mandan:		
Conservation Tillage-Diverse Crop Systems to Use Water and Nutrients Efficiently Protect Environment	941,100	3.0
Water Management Systems to Sustain Production and Environmental Quality in the Northern Great Plains	708,900	2.0
Improvement of Forage Germplasm for Conservation and Forage-Livestock Systems in the No. Great Plains	685,200	2.0
Total	2,335,200	17.0
Ohio: Wooster: Development of Soybean Germplasm and Production Systems for High Yield and Drought Prone Environments		
Total	210,100	1.0

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PROPOSED PROJECT TERMINATIONS IN FISCAL YEAR 1998—RESEARCH PROJECT TITLE BY
LOCATION, FUNDING AND STAFF YEARS—Continued

Location	Fiscal year 1997 (base) gross	Scientists
Oklahoma: Stillwater: Improving Resistance of Peanut to Biological Stress Through Germplasm and Cultural Enhancement (Extramural-OK State Univ.) (\$24,500 Est.) (This agreement was initiated 8/95 prior to receiving fiscal year 1997 program increase of \$150,000 for Peanut research)	150,000	.....
Total	150,000	.....
Oregon: Corvallis:		
Characterization of Environment and Nutritional Induced Cytokinin Changes in Wheat	214,800	1.0
Partitioning of Photosynthate as Influenced by Genotype, Mycorrhizae and Air Enriched with CO ₂	175,800	1.0
On-Farm Grass Straw Utilization Development	215,200	1.0
Germplasm Enhancement and Cultivar Germplasm Enhancement and Cultivar Development of Blackberry, Strawberry, Blueberry and Raspberry (Extramural-OR State Univ.) (\$52,500 Est) (Extramural WA State Univ) (\$18,610 Est)	325,000	.....
Total	930,800	3.0
Pennsylvania:		
University Park: The Role of Variability in the Distributed Process Modeling of Soil Water	384,300	1.0
Total	384,300	1.0
Wyndmoor: Value-Added Products from Fruit and Vegetable Processing Wastes	691,500	3.0
Total	691,500	3.0
Puerto Rico: Mayaguez: Transferring Technology for the Improvement of Agriculture in P.R. and other Caribbean Countries	158,700	.....
Total	158,700	.....
Texas:		
College Station: Biological Control of Horn Flies in Pasture Ecosystems	221,500	1.0
Total	221,500	1.0
Weslaco: Development of Improved Cultivars and Efficient Cultural Practices for Kenaf and Crotalaria (Extramural-Rio Farms) (\$17,500 Est) (Extramural-III. Ag. Exp Sta.) (\$25,000)	343,900	1.0
Total	343,900	1.0
Washington:		
Prosser:		
Intelligent Farm Management Systems (Extramural-WA. State Univ.) (\$62,550 Est)	256,700	1.0
Viruses and Virus Resistance in Alfalfa Germplasm	459,700	1.0

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PROPOSED PROJECT TERMINATIONS IN FISCAL YEAR 1998—RESEARCH PROJECT TITLE BY
LOCATION, FUNDING AND STAFF YEARS—Continued

Location	Fiscal year 1997 (base) gross	Scientists
Evaluation of Advanced Potato Clones for Resistance, Agronomic and Culinary Traits	142,100	
Potato Production Systems to Conserve Resources and Reduce Pesticide Use	578,200	2.0
Total	1,436,700	² 4.0
Pullman:		
Genetically Enhanced Wheat for Quality Productivity and Resist- ance to Biotic and Abiotic Stresses	146,100	
Biochemical and Molecular Regulation of Preharvest Sprouting and Grain Dormancy in Wheat	67,200	
Control of Foliar Diseases and Smuts of Wheat	136,700	
Total	350,000	
Headquarters: Floriculture	200,000	
Total	200,000	
Subtotal Terminations	22,107,800	³ 59.0
Management: Management Savings	915,200	
Grand Total	23,023,000	³ 59.0

¹ Excludes 2 SY's proposed for redirection to Miles City, MT.

² Excludes 4 SY's proposed for redirection (2 SY's to Pullman, WA and 2 SY's to Aberdeen, ID).

³ Excludes 6 SY's proposed for redirection.

Note: Fiscal year 1997 Extramural Research Estimates are based on Actual Agreements in fiscal year 1996.

Question. Again, you are justifying an increase for Integrated Pest Management; yet you are recommending the termination of many projects which deal with pest control; biocontrol; sustainability; reduced herbicides; production systems beneficial to the environment; conservation systems, etc. Please explain your rationale for the elimination of many of these projects that target IPM goals.

Answer. ARS does not propose to terminate all research in these areas, but only selected specific projects that have been judged to be relatively less critical at this point in time. Also, other locations could fill any critical gaps created by the terminations. Factors considered as a major part of the rationale in making these judgments were research relevance, impact, degree of Federal role, benefit to the public at large, adequacy of resource level to sustain a critical mass effort, and others.

ARS RESEARCH

BEE RESEARCH

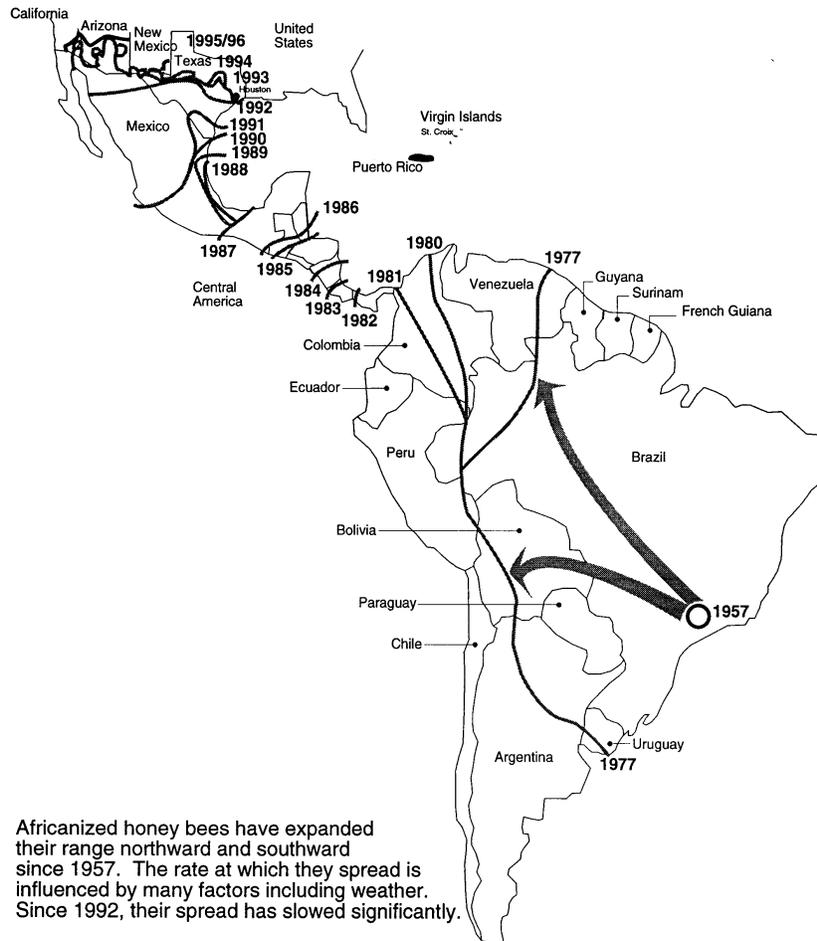
Question. Please provide a map indicating the history of the Africanized bee migration from South America. Where are its current boundaries?

Answer. A map reflecting the history of the Africanized bee migration from South America and its current boundaries is provided.

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Migration of Africanized Honey Bees



Africanized honey bees have expanded their range northward and southward since 1957. The rate at which they spread is influenced by many factors including weather. Since 1992, their spread has slowed significantly.

Question. Where do you project the Africanized bee population will ultimately extend?

Answer. There have been several projections on how far the Africanized honey bee (AHB) migration will ultimately extend. The actual migration will depend on the impact of parasitic mites, climate, availability of food throughout the year, and competition for food from the commercial European honey bees (EHB).

We predict that along the Pacific coast, the Africanized bee will extend its range as far north as San Francisco, on a seasonal basis if not permanently. Similarly, along the East coast it may extend its range to Norfolk, Virginia, on a seasonal basis if not permanently. In the South, we believe that ultimately the Africanized bee will migrate to and establish in the southern States—Florida, Georgia, Alabama, Mississippi, Arkansas—along the Gulf Coast.

However, as the Africanized bees extend their range northward, they will, through matings with the commercial European bees over many generations, lose their distinctive genetic and behavioral characteristics. This is expected to happen because by mating with local bees in successive generations, the genetic material of AHB will be diluted out to the point that it would be difficult to distinguish the hybrid from the European bees.

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Question. What is the status of Varroa and Acarine mites? What research is being done on these pests? At what locations?

Answer. Varroa and Acarine mites continue to cause significant economic losses to beekeepers. However, honey bee colony losses this past winter have been light compared to those in the previous winters. This is probably due, in large part, to the relatively mild winter and increased beekeepers' attention to monitoring and treating with available acaricides. Most beekeepers lose bee colonies to mites during the winter. Consequently, beekeepers must replace these colonies in the spring. The high demand for honey bee queens drives up the cost of starting new colonies to make up for the winter loss of colonies. This, in turn, increases the cost of rental bees to the farmers and vegetable and fruit growers.

New and improved methods of mite control are being developed at four ARS locations. Scientists at the Honey Bee Research Units at Weslaco, Texas, and Tucson, Arizona, are developing new and improved methods for chemical control of mites; the Bee Research Laboratory at Beltsville, Maryland, is focused on finding natural products including such things as clove oil, eucalyptus, and thymol for mite control. Scientists are conducting research on developing a gel formulation of formic acid, which is being tested for efficacy in controlling mites under different climates in Texas, Nebraska, and Minnesota. Scientists at the Honey Bee Breeding, Genetics, and Physiology Research Unit at Baton Rouge, Louisiana, are working on selection and propagation of mite resistant stocks of honey bees.

Question. How much is the agency spending on honey bee research by location for fiscal years 1997 and 1998?

Answer. In fiscal year 1997, funding for honey bee research is \$4,720,000. This excludes funds for "other pollinating insects" in the amount of \$1,193,100. The ARS total bee research budget in fiscal year 1997 amounts to \$5,913,100. The proposed fiscal year 1998 funding remains at the same level. Honey bee research by location is provided in the following table.

Location	Fiscal year—	
	1997 funds	1998 funds
Tucson, AZ	\$1,021,900	\$1,021,900
Baton Rouge, LA	1,115,600	1,115,600
Beltsville, MD	1,772,800	1,772,800
Weslaco, TX	809,700	809,700
Total	4,720,000	4,720,000

Question. Please breakdown your spending by honey bee research; Africanized bee research, Varroa mite research, and Acarine mite research. How many scientists are involved in these areas of research?

Answer. A breakdown in spending by honey bee research, Africanized bee research, Varroa mite research, and Acarine mite research is provided in the following table.

Area of research	Fiscal year 1997—	
	Funds	Scientists
Honey bee research	\$4,720,000	¹ 19
Africanized bee research	1,860,000	8
Varroa mite research	417,700	1
Acarine mite research	941,900	4

¹ This excludes "other pollinating research" of \$1,193,100 and 4 scientists.

Question. By location, how many scientists working on bee-related research are on board and how many positions are unfilled?

Answer. The following table provides, by locations, the number of scientists on board working on bee-related research and the number of unfilled positions.

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Location	Number of scientists	Number of unfilled positions
Tucson, AZ	5
Baton Rouge, LA	4
Beltsville, MD	8	.....
Weslaco, TX	3	1
Logan, UT	3	1

RANGE RESEARCH

Question. Specify the objectives of ARS range research?

Answer. The primary objective of the ARS rangeland research program is the development of better practices for the management of range vegetation and livestock practices which not only sustain profitable production of meat and fiber but also protect the soil and vegetation, maintaining the ability of rangelands to function as watersheds and provide wildlife habitat. For example, research at certain locations focuses on how to manage rangelands during periods of drought. Another objective of the rangeland research program is to develop a better understanding of the ecological processes which characterize these complex environments, such as nutrient cycling, the hydrological cycle, and the effects of grazing on the many kinds of plants which grow on rangelands. This work supports the development of computer models and decision-support tools which allow managers of both public and privately-owned rangelands to select the best options from among the alternatives available to them. The ecosystem research also provides the fundamental knowledge upon which improvements can be made in natural resource conservation and environmental protection. ARS research focuses on the development of more productive and drought-tolerant forage grasses, provides information concerning the biology and control of introduced weeds, and provides better ways to avoid livestock losses due to poisonous weeds. ARS laboratories in the eastern U.S. and in foreign countries support the research directed at range weed control and poisonous plants by evaluating potential biological control agents and characterizing the chemistry of plant toxins.

Question. Which locations carry out these objectives? What funds were obligated in fiscal year 1996? What is your funding estimate for fiscal years 1997 and 1998?

Answer. The locations and funds allocated for fiscal years 1996–1998 to carry out these objectives are as follows:

Location	Fiscal year—		
	1996 funds	1997 funds	1998 funds
Booneville, AR	\$247,090	\$253,300	\$253,300
Tucson, AZ	320,292	320,100	320,100
Albany, CA	166,980	166,900	122,800
Fresno, CA	578,386	536,100	536,100
Ft. Collins, CO	565,592	659,600	643,600
Boise, ID	498,070	495,700	495,700
Dubois, ID	319,813	309,300	309,300
Columbia, MO	30,393	30,000	30,000
Beltsville, MD	110,474	106,400	106,400
Frederick, MD	132,858	124,100	124,100
Bozeman, MT	461,737	.....	.....
Miles City, MT	481,910	438,700	719,800
Sidney, MT	3,170,921	1,891,300	1,891,300
Lincoln, NE	156,302	102,000	102,000
Mandan, ND	601,398	555,200	.....
Las Cruces, NM	1,107,472	1,046,300	1,346,300
El Reno, OK	139,291	.....	.....
Burns, OR	381,400	350,700	350,700
Woodward, OK	1,199,756	1,066,700	1,066,700
Temple, TX	1,432,860	1,342,300	1,342,300
Weslaco, TX	332,014	318,900	318,900
Logan, UT	1,680,204	1,404,800	1,404,800

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Location	Fiscal year—		
	1996 funds	1997 funds	1998 funds
Cheyenne, WY	798,269	708,000	708,000
Buenos Aires, Arg	283,237	258,100	258,100
Montpellier, France	573,567	496,000	496,000
Total	15,770,286	12,980,500	12,946,300

Question. Please explain how your range research objectives relate to those of the Forest Service, BLM, and Interior.

Answer. ARS range research objectives directly support the research needs and objectives of the Forest Service, Bureau of Land Management, and Bureau of Reclamation of the Department of the Interior, in that the technology and knowledge produced by the ARS range research programs are often directly applicable to their specific problems. Much of the ARS range research is conducted in western States where most rangeland is managed by the Forest Service and Bureau of Land Management. Such research is often conducted cooperatively by ARS and other Federal agencies. Rangeland research conducted by the Forest Service is primarily directed at maintenance and restoration of native plants and animals and their habitats, biodiversity, shrub ecology, and monitoring of the ecological status of rangelands. Forest Service research does not address the agricultural use of rangelands for food and fiber production, with the exception of a program concerned with overlap of habitat requirements for livestock and wildlife. The Bureau of Land Management and the Bureau of Reclamation have little in-house research capability, and they are considered to be important customers by ARS range researchers. Similarly, the ARS range research program supports the needs of the Natural Resources Conservation Service for science and technology related to improved management and conservation of privately-owned rangelands.

AQUACULTURE RESEARCH

Question. Please list those locations involved in aquaculture research, their specific programs and current funding and staffing.

Answer. The funding and scientists for aquaculture by location are as follows:

Location	Fiscal year 1997—	
	Funds	Scientists
Auburn, AL	\$841,800	3.0
Pine Bluff, AR	373,300	2.0
Stuttgart, AR	1,235,600	4.0
Hilo, HI, Oceanic Inst	1,612,400	.....
New Orleans, LA	759,400	2.4
Beltsville, MD	142,800	.....
Stoneville, MS:		
Warm Water Aquaculture	2,652,000	2.5
Other—In-house	505,100	2.5
Total MS	3,157,100	5.0
Wyndmoor, PA	250,000	1.0
Kearneysville, WV	1,447,200	.....
Headquarters, College Sta., TX	365,200	.....
Total	10,184,800	17.4

The specific ARS aquaculture research programs are as follows:

Auburn, AL.—Diagnosis and control of diseases and parasites of cultured fish.

Beltsville, MD.—Aquaculture Information Center. Provides the public with information on aquaculture.

Albany, CA (Hilo, HI).—Tropical aquaculture, feeds and culture technology development.

New Orleans, LA.—Improve flavor quality of farm-raised catfish.

Pine Bluff, AR.—Aquaculture production and processing technology.

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Stoneville, MS.—Improve production efficiency, including breeding, genetics, and endocrinology of catfish.

Kearneysville, WV.—Water quality control and intensive culture of fish.

College Station, TX.—Food safety of catfish.

Stuttgart, AR.—Research on therapeutics evaluation, health management and culture systems for farm-raised fish.

Dover, DE (Wyndmoor, PA Worksite).—Food safety of farm-raised fish.

Question. What accomplishments are being generated from aquaculture research?

Answer. ARS scientists conducting disease research at Auburn, AL have demonstrated that some strains of commercial channel catfish have resistance against *columnaris disease*. *Columnaris disease*, caused by the bacterium *Cytophaga columnaris*, is responsible for widespread mortality in channel catfish farms. Through a Cooperative Research and Development Agreement with Gold Kist, Inc., Inverness, MS, ARS scientists at the Fish Diseases and Parasites Research Laboratory, Auburn, AL, demonstrated that some strains of channel catfish selectively bred by Gold Kist were more resistant than other strains to mortality from *columnaris disease*. Selective breeding of the resistant strains should result in commercial catfish less susceptible to *columnaris disease*. This could reduce losses to the disease by \$10 to \$15 million annually.

ARS scientists at Auburn, AL, have developed an experimental vaccine to control enteric septicemia of commercial catfish. *Edwardsiella ictaluri* causes the disease, enteric septicemia, in catfish. Losses from the disease reduce catfish farm revenues by \$25 million annually. Scientists at the Fish Diseases and Parasites Research Laboratory, Auburn, AL, have developed a modified live vaccine to protect commercial catfish. Protection from the vaccine lasts 6 months or more. While the vaccine is presently applied through immersion of the fish in water, the ARS scientists are working on feed-delivery of the vaccine for catfish fingerling producers.

ARS scientists at Stuttgart, AR, have shown that disease treatment with copper sulfate poses no hazard to human consumers of cultivated food fish. Copper sulfate has been effectively used for many years as a treatment for waterborne parasitic, bacterial, and fungal diseases of cultivated fish, but has never been approved by the U.S. Food and Drug Administration (FDA) for use on food fish because of questions about human food safety. Scientists at the National Aquaculture Research Center, Stuttgart, AR, demonstrated that copper concentrations in fish tissue remain unchanged when cultivated channel catfish are exposed to levels of copper sulfate far in excess of concentrations required to treat diseases. The FDA has accepted the results of the study as demonstrating that the use of copper sulfate for treatment of waterborne diseases of cultivated food fish presents no hazard to the health of human consumers.

ARS scientists in Stoneville, MS, have developed genetically improved strains of channel catfish for commercial culture. Commercial use of improved catfish germplasm, developed through an applied selective breeding program, will dramatically improve production efficiency in commercial catfish production. Scientists at the Catfish Genetics Research Unit, Stoneville, MS, have evaluated and selected strains of channel catfish for commercially important traits such as growth, reproductive performance, processing characteristics, and disease resistance. DNA markers, termed microsatellites, have been isolated and characterized; the microsatellites are useful for identifying and tracking genetically improved strains. These markers will form the basis of a catfish genetic map that will improve the efficiency of genetic selection in this species.

Canned bighead carp products developed by an ARS food technologist at Pine Bluff, AR, were evaluated by consumer taste panels and were found to have a high level of acceptance.

ARS scientists in New Orleans, LA, have developed highly sensitive methods to detect off-flavor compounds in farm-raised catfish. The high incidence of environment-derived off-flavors in farm-raised catfish has consistently been identified as the most important production-related problem in the catfish aquaculture industry. Scientists at the Southern Regional Research Center have developed extraction and gas chromatographic methods that can detect geosmin and MIB, the two most important catfish off-flavor metabolites, at concentrations near the theoretical limits of the most sensitive electronic sensors and equal to the levels of human perception.

Scientists at Shepherdstown, WV, have developed an improved ultrasonic waste feed monitor through a cooperative arrangement with the University of Mississippi's National Center for Physical Acoustics. This device efficiently detects waste feed, while ignoring fecal material, and represents an improvement over earlier technology developed by these scientists. The device is currently being commercialized through a California computer company.

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Funding levels provided for the cooperative research program with the Freshwater Institute are \$1,447,200 in both fiscal year 1997 and fiscal year 1998.

FRUIT FLY RESEARCH

Question. Please detail the fruit fly research program.

Answer. The ARS fruit fly research program encompasses a diversity of approaches that address the issues of detection, control and eradication of pest species. Major emphasis is placed on the following seven fruit fly species: Mediterranean, Oriental, Caribbean, Mexican, Melon, Malaysian, and Papaya. Innovative research programs include the development of new, sensitive traps for detecting fruit flies; development of an environmentally acceptable toxicant as a replacement for malathion in bait sprays, including photoactivated dyes; commodity treatments to allow movement of fruit-fly host material from areas quarantined for fruit flies; biological control with fruit fly specific parasites to reduce the level of pest populations; enhancement of natural resistance of host fruit to infestations; and improvements in competitiveness of sterile flies released as a part to the sterile insect technique. Taken together, these programs provide an integrated approach to the control of pest species of fruit flies, that emphasizes early detection with more effective traps, reduction in the pest populations through biological control with parasites and environmentally acceptable pesticides, and improvements in the sterile insect technique.

Question. Where is this research carried out?

Answer. Research on fruit flies is based at the following eight ARS locations: Albany, CA; Fresno, CA; Gainesville, FL; Miami, FL; Orlando, FL; Hilo, HI; Beltsville, MD and Weslaco, TX.

Question. How much money was obligated for each of those pests in fiscal year 1996; what is currently planned and what is your estimate in fiscal year 1998?

Answer. The amounts for each pest species are as follows:

Species	Fiscal year—		
	1996 obligations	1997 funds	1998 funds
Caribbean Fruit Fly	\$1,652,744	\$1,539,600	\$1,539,600
Malaysian Fruit Fly	766,054	745,500	745,500
Mediterranean Fruit Fly	3,242,847	3,240,400	3,240,400
Melon Fruit Fly	845,814	823,400	823,400
Mexican Fruit Fly	947,197	781,400	781,400
Oriental Fruit Fly	1,076,926	1,066,300	1,066,300
Papaya Fruit Fly	175,098	176,000	176,000
Other Fruit Flies	2,124,327	2,086,700	2,086,700
Total	10,831,007	10,459,300	10,459,300

SUGAR CROPS RESEARCH

Question. Please describe your research in sugar crops.

Answer. Research on sugar crops includes breeding for improved cultivar adaptation to stress environments and increased levels of pest and disease resistance; more efficient production systems; improved management for pest, disease and weed control; and development of value-added coproducts of sugarcane production.

Question. Where is the research performed? What is the current and projected funding for this research?

Answer. Listed below are the locations where research is performed and the fiscal year 1997 and 1998 funding for this research.

Location	Fiscal year—	
	1997 funds	1998 funds
Albany, CA	\$21,900	\$21,900
Salinas, CA	1,314,400	1,314,400
Ft. Collins, CO	620,300	620,300
Canal Point, FL	891,600	891,600
Miami, FL	108,600	108,600
Hilo, HI	1,491,700	1,491,700

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Location	Fiscal year—	
	1997 funds	1998 funds
Peoria, IL	94,000	94,000
Urbana, IL	217,400	217,400
New Orleans, LA	2,101,900	1,702,000
Beltsville, MD	951,800	951,800
Frederick, MD	32,000	32,000
East Lansing, MI	659,700	659,700
Sydney, MT	111,500	111,500
Fargo, ND	1,080,200	1,080,200
Wyndmoor, PA	62,600	62,600
Mayaguez, PR	95,600	95,600
College Station, TX	219,700	219,700
Weslaco, TX	319,900	319,900
Headquarters	64,000	64,000
Total	10,458,800	10,058,900

Question. Please discuss recent accomplishments in sugar crops research.

Answer. Recent accomplishments for sugarcane and sugarbeets are provided for the record.

Sugarcane—(1) The research team in Houma, Louisiana has made major advances in breeding for resistance to sugarcane rust, smut, yellow leaf syndrome and leaf scald. Four recent cultivars, were developed. These cultivars have the potential of increasing sugar yields per unit area by 10–25 percent. The team has released 6 varieties in the last 6 years and has registered 5 germplasm clones with superior resistance to the sugarcane borer. (2) Research in Florida is focusing on the development of sugarcane that can be grown under high water table conditions. Varietal selections have been made that tolerate these conditions in the changing south Florida ecosystem environment. Studies are also in progress on reducing the levels of phosphorus applied to sugarcane and preliminary results show that concentrations of phosphorus applied to the crops may be reduced without affecting plant growth.

Sugarbeets—(1) Research in Fargo, North Dakota, on development of a biopesticide for control of sugarbeet root maggot has shown that selected strains of *Bacillus thuringiensis* can be used to infect the maggot achieving high mortality. In addition, a germplasm line has been selected that has a high level of resistance to the root maggot. (2) ARS researchers have released sugarbeet lines with resistance to *Cercospora* leafspot disease, *Rhizoctonia* root disease, and *Rhizomania*, three of the most serious diseases of sugarbeet.

LOWER DELTA NUTRITION RESEARCH

Question. Please describe your progress in establishing and coordinating research and intervention activities in the Lower Delta.

Answer. The Lower Mississippi Delta Nutrition Intervention Research Initiative (Delta NIRI) involves a consortium of seven partners: Alcorn State University, Arkansas Children's Hospital Research Institute, Pennington Biomedical Research Center, Southern University and A&M College, University of Arkansas at Pine Bluff, University of Southern Mississippi, and the Agricultural Research Service (USDA/ARS). The consortium is publishing a monograph of existing data relative to the nutritional status and health of people in the Delta of Arkansas, Louisiana, and Mississippi. Thirty-six counties (10 in Arkansas, 12 in Louisiana, 14 in Mississippi) have been selected for the research based on rates of unemployment, population, and percent of population below the poverty level. A key informant survey has been piloted and the main survey will be implemented in the 36 counties in May/June, 1997. With direction from a USDA Scientific Review Board, a pilot/validation study to determine the feasibility of using telephone interview methodology to obtain food consumption and food security data will be underway during the summer of 1997. This information will be used as baseline data to evaluate the impact of welfare reform programs in the area at a later time. Other research protocols are being developed, i.e., a community assessment survey and a longitudinal study of nutritional status of select segments of the population.

Question. Please list objectives and funding by participant. Does the Agency still consider this to be a ten-year program?

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Answer. The overall objective of the project is “to design, implement, and to experimentally test nutrition interventions that will improve the health and well-being of people in the Lower Mississippi Delta.” This objective is consortium-wide with each partner participating in each of them. To further this objective, each partner is participating in capacity building and hiring at least one new nutrition related scientist. Each participant in the Lower Delta Nutrition Intervention Initiative is currently funded at \$448,100. ARS considers this to be a major assessment and intervention study which will require 10 years to complete.

Question. What is your overall funding?

Answer. The overall funding of the program in fiscal year 1997 is \$3,166,900. Of this, the Agricultural Research Service receives \$478,300 and each of the other partners is funded at \$448,100 each.

Question. Describe your accomplishments to date.

Answer. A functioning and fully participatory consortium of seven diverse partners was organized, and they have identified the problems to be addressed based on an understanding of the information that is available regarding the needs of the population of the Lower Mississippi Delta. A monograph describing existing data about the nutritional health and well being of the population was written and is soon to be published. An electronic communication system among the partners (including electronic mail, fax, and video conferencing) was implemented and is in regular use. A pilot study of key informants as part of a larger community assessment was implemented.

Advisory Groups were established in each State. A pilot/validation study of food consumption and food security was developed. All partners participated in three capacity building workshops focused on nutritional and dietary assessment methods, community assessment methods, and nutrition intervention methodology.

Question. To what extent do you classify your activities as intervention as opposed to research?

Answer. The proposed activities are research. Although the main objective of the project is to carry out nutrition intervention research, the interventions will be experimentally tested (with controls) to determine which interventions are effective and can be sustained in the Delta. Such information can then be used by other agencies to design and implement effective interventions based on the results of sound research.

Question. What is your funding goal for this program?

Answer. An effective nutrition intervention research program is projected to require \$10.5 million per year. This level of support will provide for complete cross-sectional and longitudinal data collection. The data collected will determine specific nutritional and food related problems that could be amenable to interventions and development and testing of the nutrition intervention methodology. The proposed funding for the Lower Delta Nutrition Intervention Initiative activities in fiscal year 1998 is \$3,166,900.

Question. What level of funding is included in the fiscal year 1998 request for the Lower Delta Nutrition Initiative?

Answer. The fiscal year 1998 budget request is \$3,166,900 which is the same level of funding as the current fiscal year.

ANIMAL SCIENCE RESEARCH

Question. Please identify priority research needs in the area of animal production efficiency research. Identify funding requirements and current resources.

Answer. Current resources for animal production efficiency research total \$43,024,000. The animal production program includes research on: dairy and beef cattle, swine, chickens, turkeys, goats, sheep, and aquaculture.

The overall goal of the ARS program of research is to improve the sustainability and competitiveness and long-term profitability of animals used to produce food and fiber, while protecting the environment. Research is conducted in the disciplines of genetics, reproduction, nutrition, pre-harvest food safety, animal waste management of integrated systems, grazingland management and product quality. ARS scientist and laboratories are using the most recent technologies to improve the efficiency of animal production, based on ARS facilities and scientific capabilities. There are five high priority areas in animal production that warrant additional research effort. The budget proposes to expand and initiate new research in Pre-harvest food safety in animal production systems—\$1.6 million.

Pre-harvest Food Safety in Animals—\$1.6 million of additional funding, current resources total \$9.5 million

Exposure, infection, and contamination of animals by certain bacteria and parasites during production is a known source of pathogens in our meat-based foods.

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Several components of the live animal sector offer opportunity for significant reduction of pathogens in the animals presented for slaughter. The dynamics of pathogen transmission and the host parasite relationship of microbial organisms which are important to food safety, must be elucidated in order to identify critical control points.

Effective pathogen interventions, such as competitive colonization systems, which have been successfully accomplished for broilers, need to be developed to protect swine and cattle against Salmonella and E. Coli 0157:H7. Production practices for cattle and swine must be correlated with post-processing contamination of food products. The dynamics of Campylobacter transmission during production must be delineated in order to identify control points and strategies to limit contamination in poultry. Antibiotic resistance is emerging as a food safety concern, and we need to characterize the epidemiology, transmission and biological basis of the emerging resistance of Salmonella typhimurium DT104 in order to prevent its occurrence and maintain consumer confidence in meat and poultry based foods.

Question. Please update your priority research needs in the area of animal health. Identify funding requirements.

Answer. The USDA-ARS Animal Health Program of research concentrates on three areas: (1) emerging diseases within the U.S.; (2) chronic animal diseases within the U.S. that cause production losses; and, (3) foreign animal diseases that pose a threat to the U.S. livestock industry. The 1998 budget request for ARS emerging diseases requested \$2.5 million in new funding research in these three categories as follows: (1) porcine reproductive syndrome, bovine viral diarrhea, and Cryptosporidia; (2) John's disease and transmissible spongiform encephalopathies; and, (3) foreign animal diseases including classical swine fever (hog cholera), highly pathogenic Avian Influenza, and velogenic Newcastle Disease.

Question. ARS has a number of animal science laboratories. Please explain the distinction of the research at these centers.

Answer. ARS has four major animal science laboratories. The Plum Island Animal Disease Center (PIADC), Greenport, New York, is responsible for research to protect U.S. animal industries and exports against catastrophic economic losses caused by foreign animal disease agents. The National Animal Disease Center (NADC), Ames, Iowa, conducts basic and applied research on selected diseases of economic importance to the U.S. livestock and poultry industries. The Roman L. Hruska U.S. Meat Animal Research Center (MARC), Clay Center, Nebraska, is responsible for efficiency of production that includes reproductive efficiency, nutrition, production and health systems, genetics, germplasm and gene mapping, environmental stress, manure management and product safety and quality research for the U.S. beef, sheep, and swine industries. The Livestock and Poultry Sciences Institute (LPSI), Beltsville, Maryland, conducts fundamental research to improve genetic evaluation techniques for dairy breeding, develops knowledge of the genomes/germplasm of livestock, identifies factors that affect growth and lactation, controls parasitic diseases, improves the efficient use of dietary nutrients for livestock and poultry, and develops techniques to enhance the quality and safety of meat and poultry products.

In addition, ARS has animal sciences laboratories at a number of locations that focus on regional problems such as aquaculture, forage/grazingland production systems, and other animal health related issues.

Question. How are these programs coordinated?

Answer. All ARS research programs are coordinated by the National Program Staff (NPS), which consists of approximately 30 National Program Leaders (NPL's), 3 Associate Deputy Administrators (ADA's), and the Deputy Administrator for national programs. The NPS professional staff members are distinguished scientists in their fields. The work of the ARS animal science laboratories is managed by one or more NPL's with expertise in various disciplines of animal and veterinary sciences under the leadership of the ADA for Animal Production, Product Value and Safety. In establishing national research programs relating to animals, the NPL's focus the work of the scientists on addressing specific problems of high national priority.

The recent restructuring of NPS and the aggregation of 1,100 research projects in 25 national programs, is changing the way ARS manages its research activities. The new broader-based national programs will be coordinated by multi-disciplinary teams of NPL's. This new organizational structure will improve program management, and make it easier for ARS to meaningfully involve customers and stakeholders in the process of setting research priorities and increase the rate and timeliness of knowledge, technology, and information transfer to potential users. The new approach in managing NPS and its research programs will also make ARS more responsive in meeting the priorities identified by Congress in the Farm Bills and Appropriations measures.

Question. Provide current funding and staffing levels for each.

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Answer. The current funding and scientific staffing levels for animal science research by location are as follows:

Location	Fiscal year 1997—	
	Funds	Scientists
Auburn, Alabama	\$841,800	3.0
Booneville, Arkansas	971,700	2.9
Fayetteville, Arkansas	917,800	4.5
Brooksville, Florida	415,700	1.5
Gainesville, Florida	4,288,500	15.0
Athens, Georgia	4,138,300	12.9
Hilo, Hawaii	1,612,400	.....
Dubois, Idaho	1,700,600	3.6
Peoria, Illinois	919,900	.....
West Lafayette, Indiana	985,600	3.0
Ames, Iowa	189,200	1.0
Ames, Iowa (NADC)	18,354,200	46.0
Beltsville, Maryland (LPSI)	23,725,900	55.6
East Lansing, Michigan	2,705,100	9.1
St. Paul, Minnesota	194,700	1.0
Mississippi State, Mississippi	818,400	3.6
Stoneville, Mississippi	3,157,100	2.5
Columbia, Missouri	629,000	2.0
Miles City, Montana	1,745,100	5.3
Clay Center, Nebraska (MARC)	13,566,800	37.3
Lincoln, Nebraska	874,900	1.0
Ithaca, New York	265,900	1.0
Greenport, New York (PIADC)	9,853,300	6.9
Raleigh, North Carolina	149,700	0.8
Fargo, North Dakota	931,900	3.5
El Reno, Oklahoma	346,400	.8
Wyndmoor, Pennsylvania	186,800	.6
Bushland, Texas	308,200	1.2
College Station, Texas	2,155,100	8.7
Kerrville, Texas	2,939,600	9.0
Logan, Utah	1,833,600	6.6
Pullman, Washington	2,059,700	6.0
Beckley, West Virginia	496,300	1.5
Kearneysville, West Virginia	1,447,200	.....
Madison, Wisconsin	1,574,000	5.5
Laramie, Wyoming	2,199,300	6.0.8
Panama City, Panama	997,900	2.0
H.Q. Administered Funds	4,454,800	.....
Total	114,952,000	273.9

FRUIT AND NUT RESEARCH

Question. Describe your current program in fruit and nut research?

Answer. The current program in fruit and nut research includes research activities on many different fruit and nut crops including apples, pears, oranges, grapefruit, lime, lemon, plum, peach, prune, strawberry, raspberry, blueberry, grape, pecan, walnut, hazelnut and many minor tropical and subtropical crops. Projects include both pre- and post-harvest investigations for improved product varieties and quality. Projects at 35 locations involve both basic and developmental research in plant breeding and genetics, physiology, entomology, pathology, and engineering technologies.

Question. Where is it conducted? By location, provide major research objectives, current funding, and staffing.

Answer. Research locations, current funding, staffing and major research objectives are:

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Location	1997 funding	Scientists
Booneville, AR	\$126,700	0.2
Tucson, AZ	92,700	.5
Albany, CA	3,096,000	10.9
Davis, CA	1,162,300	3.5
Fresno, CA	3,667,200	10.9
Riverside, CA	57,500	.3
Salinas, CA	491,000	.9
Ft. Collins, CO	279,100	.5
Newark, DE	33,200	.2
Winter Haven, FL	63,200	.4
Montpellier, FR	204,100	.9
Byron, GA	2,632,000	6.0
Tifton, GA	51,100	.....
Hilo, HI	132,900	.3
Peoria, IL	142,800	.7
Urbana, IL	2,100	.....
New Orleans, LA	937,400	2.4
Beltsville, MD	4,529,000	15.5
Frederick, MD	243,800	.9
Poplarville, MS	871,800	4.0
Stoneville, MS	133,400	.5
East Lansing, MI	210,000	.5
Geneva, NY	713,600	1.3
Wooster, OH	296,400	1.5
Lane, OK	188,100	.6
Corvallis, OR	2,967,800	8.6
Wyndmoor, PA	372,500	1.5
Mayaguez, PR	39,000	.1
College Station, TX	590,200	2.0
Weslaco, TX	199,000	.8
Prosser, WA	26,600	.....
Wenatchee, WA	1,520,200	6.0
Yakima, WA	3,164,200	4.6
Beckley, WV	44,100	.2
Kearneysville, WV	5,316,900	15.9
Headquarters	1,022,900	.....
Total	35,620,800	103.1

Booneville, AR.—Develop management practices for soil and water and implement agroforestry techniques on family farms.

Tucson, AZ.—Improve bee pollination of crops and ecologically important plants.

Albany, CA.—(1) Develop improved methods for detection of compounds affecting healthfulness and quality of foods; (2) control of nutritional properties of extruded cereal based foods; (3) detection of aflatoxin contamination in human foods by imaging technologies; (4) image analysis and other physical methods for detection of unwanted matter in fresh and processed food for improved quality. Other projects include: (1) the modification of vegetable oils as raw materials for industrial uses; (2) development of edible coatings to keep lightly processed vegetables fresh; (3) devise innovative processing to develop value-added fruits and vegetables for foreign markets; (4) control aflatoxin in tree nuts using biocontrol procedures; and (5) genetically engineer resistance and reduce aflatoxin in tree nuts and figs by decreasing invasion of *Aspergillus flavus* caused by insects.

Davis, CA.—Develop control practices for bacterial and viral diseases of fruit and nut trees and grapes, resistant rootstocks or cultivars, and chemical treatments to eliminate pre-plant fumigation with methyl bromide.

Fresno, CA.—Develop quarantine/post-harvest control strategies to reduce losses by insect pests in the investigation of new fumigants and methodologies to reduce methyl bromide emissions. This includes: (1) research on reducing or eliminating chemical pesticides and developing alternative biological and physical treatments and integrated pest management control procedures. Research is also being done to

develop alternatives to methyl bromide in the management of soil pests. In addition, *Prunus* and *Vitis* germplasm is hybridized for increased pest resistance, drought and salinity tolerance with improved fruit characteristics. Control post-harvest decay utilizing microbial biocontrol and improve commodity handling with reduced injury to fruit. Determine the feasibility of cropping systems utilizing subsurface drip irrigation to apply alternative fumigants as well as irrigation.

Riverside, CA.—Determine the fate and transport of alternative fumigants to methyl bromide in field application. *Salinas, CA.*—Develop biologically-based or chemical alternatives to methyl bromide as a soil fumigant for control of soilborne pests of strawberry as a component of integrated management strategies for suppression and control of soilborne pests in strawberry and vegetable crops.

Salinas, CA.—Development of preplant soil treatments as alternatives to the use of methyl bromide in the production of strawberries.

Ft. Collins, CO.—Determine the physiological and biochemical factors responsible for loss of seed viability and deterioration in storage and develop improved storage methods.

Newark, DE.—Develop biological control of selected insect pests: Tarnished Plant Bug, Alfalfa Plant Bug, and Sweetpotato Whitefly (in greenhouses) and quarantine evaluation of predators of Russian Wheat Aphid.

Winter Haven, FL.—Develop alternative chemical and non-chemical treatments for preserving quality and improving convenience of minimally processed fresh fruits and vegetables.

Montpellier, FR.—Discover, collect, and ship to the U.S. new natural enemies to reduce populations of codling moth, gypsy moth, pear thrips, pear psylla, and apple ermine moth.

Byron, GA.—(1) Breed and develop deciduous peach fruit cultivars and rootstocks adapted to the Southeast. (2) Develop control strategies for insect problems of deciduous fruit. (3) Identify and develop improved cultivation and disease management strategies for pecan. (4) Identify factors affecting the nature and occurrence of disease and nematode problems of deciduous fruits in the southeastern U.S. (5) Develop disease and nematode management procedures based on biological control and nonchemical methods for the management of post-harvest diseases of stone fruits. (6) Develop alternative methods of biological control for insect pests of pecan.

Tifton, GA.—Determine pesticide residues in food crops in support of petitions to EPA through the IR-4 "Minor Use" project for registration or reregistration of pesticide use.

Hilo, HI.—Develop novel and more efficient semiochemical based eradication technology for fruit flies.

Peoria, IL.—Identify biologically active natural products and determine their potential for commercial exploitation as herbicides, fungicides, and plant growth regulators.

Urbana, IL.—Develop control measures for weeds in vegetables, fruits and specialty crops and determine pesticide residues in harvested products.

New Orleans, LA.—This multifaceted research program includes: (1) investigation on the conversion of commodity by-products (nut shellers, grain millers, oilseed crushers) to value-added absorbents and the optimization of absorbent properties for removal of metals and organics; (2) immunological studies on enzymes involved in aflatoxin formation to investigate processes of aflatoxin formation; (3) clone genes governing aflatoxin formation in studies designed to select plants expressing compounds inhibitory to aflatoxin formation; and (4) optimize the flavor and texture of fresh cut fruit products and develop methodologies for predicting food sensory quality to meet consumer demand.

Beltsville, MD.—(1) establish and implement area-wide pest management for high priority agricultural pests of fruit and other crops; (2) develop instrumentation to nondestructively assess apple fruit quality; (3) develop methods to utilize gypsum byproducts for use in field soil applications of fruit crops; (4) enhance the development of blueberry cultivars utilizing molecular techniques to manipulate the chilling required for flowering; (5) develop methods to genetically transform raspberry and regenerate plants in tissue culture; (6) develop and introduce new germplasm and cultivars of small fruits, such as blueberry and strawberry, that are pest and disease resistant; (7) develop molecular methods for detection and control of viruses and viroids in fruits; (8) process prohibited foreign germplasm through quarantine and deposit in U.S. repositories; (9) develop molecular methods to detect and identify phytoplasma pathogens in plants; (10) transfer genes and develop tissue culture methods to improve peach, apple and pear; (11) increase quality and shelflife of fruit by controlling ripening and softening; (12) reduce the use of fungicides in control of post-harvest decay; and (13) determine the role of membrane lipid metabolism and composition in fruit ripening, senescence and quality.

Frederick, MD.—Identify casual agents of graft and insect transmissible disorders of foreign horticultural germplasm and develop rapid methods of detection of exotic pathogens.

Poplarville, MS.—Develop new and improved muscadine grape and other small fruit cultural practices, management techniques and germplasm for the Gulf States Region to increase yield, minimize production losses and conserve natural resources.

Stoneville, MS.—Develop and integrate biological and other non-pesticidal methods for control of insect and mite pests of pecan.

East Lansing, MI.—Develop, evaluate and implement new technologies to reduce post-harvest handling damage and nondestructively measure fruit quality for fresh markets and maintain U.S. competitiveness in international markets.

Geneva, NY.—Acquire, maintain, characterize and distribute apple, grape, and sour cherry genetic resources from this national collection.

Wooster, OH.—Develop improved spray application technology for crop protection using surfactants to reduce crop damage, reduce cost and energy use as well as pollution of the environment.

Lane, OK.—Characterize the physiological changes occurring during storage and ripening of small fruits and utilize this information to develop practices leading to increased shelflife.

Corvallis, OR.—Evaluate genetic variability within raspberry, blueberry, and strawberry and identify traits, individuals and populations valuable to breeding programs.

Wyndmoor, PA.—Develop and utilize pectin by-products from fruit in the production of biodegradable polymers.

Mayaguez, PR.—Acquire, preserve, characterize and distribute valuable tropical and subtropical germplasm.

College Station, TX.—Characterize genetic diversity of existing pecan and hickory cultivars and develop improved pecan cultivars with disease and pest resistance.

Weslaco, TX.—Develop a systems approach to quarantine security for tropical and subtropical fruits with emphasis on fruit flies.

Prosser, WA.—Develop chemical control measures for weeds in fruit crops and determine herbicide residues in crops and soils.

Wenatchee, WA.—Determine the factors that influence the development of fireblight disease and develop environmentally sound management practices.

Yakima, WA.—(1) Develop new control methods for green peach aphid and Colorado Potato Beetle utilizing beneficial agents in biological control; (2) develop areawide control program for codling moth using pheromones sterile insects and other biological control agents; (3) determine the amount persistence and fate of insect control chemicals and their toxic breakdown products; and (4) provide efficacy, phytotoxicity, and yield data residue samples for analyses to support the registration of minor use pesticides.

Beckley, WV.—Develop agroforestry systems that incorporate production of high-value specialty products to fill niche markets.

Kearneysville, WV.—(1) Identify and isolate genes affecting fruit development; (2) develop enhanced pear and plum cultivars with disease and pest resistance and improved fruit yield and quality; (3) identify and characterize genes associated with cold hardiness and stress resistance; (4) develop pest management methods to reduce pesticide use in deciduous fruit tree production systems; (5) develop plant-based technologies to treat water and concurrently produce a high-value product; (6) develop principles and mechanisms for improved harvesting of fruits for fresh market; (7) develop improved orchard practices affecting fruiting, fruit development and stress tolerance; (8) develop information on interactions between soilborne pests, root development and plant growth; (9) evaluate cover crop species and organic amendments on soilborne disease organisms and weeds as alternatives to methyl bromide; (10) examine the effects of cultural management techniques on the severity of fireblight in apple; (11) develop fundamental knowledge of the microbial community on fruit surfaces and methods for control of pre- and post-harvest disease and soilborne disease; and (12) develop nondestructive sensors measuring the post-harvest quality of apples and incorporate the sensing techniques into an automatic inspection system for sorting apples based on surface and internal defects.

Headquarters.—Staffing and operation of national clonal repositories for plant germplasm including fruits.

Question. Does the fiscal year 1998 budget propose decreases in this area?

Answer. The fiscal year 1998 budget proposes decreases in small fruits research and in development of instrumentation for the nondestructive assessment of apple fruit quality in Beltsville, Maryland. A decrease has also been proposed for herbicide work on drip irrigation in grapes with the proposed closure of the ARS location in Prosser, Washington.

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SMALL GRAINS RESEARCH

Question. Describe your current program for each of the small grains.

Answer. The small grains include wheat, oat, barley, and rice. We have research on wheat at 38 locations, oat at 13 locations, barley at 16 locations, and rice at 19 locations. The Agricultural Research Service's small grain research program is a nationally managed, fully coordinated, multi-disciplinary approach to solving production and postharvest issues. The thrusts of this research by location are:

Wheat

Albany, CA (PGEC)—Genetics modification and gene action
Albany, CA (WRRC)—Product quality and transformation
Riverside, CA—Salt tolerance
Ft. Collins, CO—Germplasm preservation
Newark, DE—Biocontrol
Gainesville, FL—Stored product insects
Athens, GA—Product composition and value
Aberdeen, ID—Preserve and evaluate germplasm
Peoria, IL—Toxin research
Urbana, IL—Virology
W. Lafayette, IN—Mechanisms of resistance to disease and insect
Manhattan, KS—Resistance to Hessian fly and rusts
Beltsville, MD—Stress physiology and disease resistance
Frederick, MD—Exotic diseases
Morris, MN—Production systems
St. Paul, MN—Spring wheat improvement and cereal rust research
Columbia MO—Wide crosses and cytogenetics
Stoneville, MS—Insect management
Sidney, MT—Management systems
Raleigh, NC—Disease resistance
Fargo, ND—Host-plant resistance, cytogenetics and quality evaluation
Mandan, ND—Production systems
Lincoln, NE—Genetic enhancement with emphasis on quality and virus resistance
Geneva, NY—Genome database management
Ithaca, NY—Virus-vector interactions
Wooster, OH—Quality evaluation
El Reno, OK—Production systems
Stillwater, OK—Insect resistance and biocontrol
Corvallis, OR—Stress physiology
Pendleton, OR—Management systems
Brookings, SD—Production systems
College Station, TX—Aerial application technology
Lubbock, TX—Production systems
Temple, TX—Sustainable agriculture
Logan, UT—Wide crosses
Pullman, WA—Stress physiology, genetic improvement, disease resistance and quality evaluation
Montpellier, FR—Biocontrol
Headquarters—Administrative activities

Oat

Albany, CA—Gene action and quality trait evaluation
Newark, DE—Biocontrol
Aberdeen, ID—Germplasm preservation, evaluation and enhancement
Urbana, IL—Virology
W. Lafayette, IN—Mechanisms of resistance—disease and insects
Ames, IA—Molecular basis of disease resistance
Beltsville, MD—Cold hardiness
St. Paul, MN—Genetic engineering and rust pathology
Ithaca, NY—Virus-vector interactions
Raleigh, NC—Disease resistance and cold hardiness
Fargo, ND—Quality trait research
Madison, WI—Quality and nutritional trait evaluation
Montpellier, FR—Biocontrol

Barley

Albany, CA—Gene action and transformation
Newark, DE—Biocontrol
Athens, GA—Pathology

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Aberdeen, ID—Preserve evaluate and enhance germplasm
Urbana, IL—Virology
W. Lafayette, IN—Mechanisms of resistance—disease and insects
Beltsville, MD—Stress physiology
St. Paul, MN—Rust pathology
Sidney, MT—Weed control
Ithaca, NY—Virus-vector interaction
Raleigh, NC—Disease resistance and cold hardiness
Fargo, ND—Genetic transformation and virology
Stillwater, OK—Insect resistance
Madison, WI—Malting quality and fungal pathology
Pullman, WA—Disease resistance
Montpellier, FR—Biocontrol

Rice

Stuttgart, AR—Germplasm evaluations and enhancement
Albany, CA—Product utilization and value
Davis, CA—Molecular genetics
Riverside, CA—Salt tolerance
Gainesville, FL—Stored product insects
Athens, GA—Plant structure and composition
Aberdeen, ID—Germplasm preservation
Manhattan, KS—Stored product insects
New Orleans, LA—Product quality and utilization
Beltsville, MD—Molecular biology
Frederick, MD—Exotic diseases
St. Paul, MN—Wild rice
Geneva, NY—Genomic database management
Ithaca, NY—Mineral nutrition
Mayaguez, PR—Tropical agricultural systems
Beaumont, TX—Variety development
College Station, TX—Aerial application
Houston, TX—Children's nutrition
Madison, WI—Fungal pathology.

Question. Please describe and identify recent accomplishments in this research.

Answer. More than 15,000 new accessions have been added to the National Small Grain Germplasm Collection in the past 10 years. Well over 400,000 accession samples have been distributed to scientists in the U.S. and worldwide in the past decade. Small grain germplasm has been evaluated for such traits as growth habit; agronomic spike-panicle, and seed descriptors; disease and insect reaction data and quality components. Characterization and evaluation data have been included in the GRIN database. All genetic and cytogenetic stocks, that have been analyzed or collected, have been systematically cataloged and stored for use by scientists nationally and internationally. Immunological and biochemical means have been developed to rapidly identify wheat lines carrying the 1RS rye chromosome which is related to some deleterious quality characteristics.

ARS geneticist/breeders have had lead responsibility in the development of important varieties of rice, hard red spring wheat, club wheat, malting barley and oats. ARS scientists have also coordinated regional testing nurseries of all small grain species in all parts of the country. Data from these nurseries have contributed information toward the release of nearly all public small grain varietal releases and many releases from private industry.

A novel gene was identified which controls aroma in a foreign rice introduction. This gene will be valuable in U.S. breeding program. The entire wheat and barley germplasm collection was evaluated and resistance to the Russian wheat aphid identified. Sources of resistance have been incorporated into improved germplasm lines, which are proving to be of immense value to U.S. breeders. A rapid, inexpensive screening method was developed which allows oat lines to be efficiently screened for beta-glucan (the cholesterol lowering soluble fiber component). ARS scientists identified 160 accessions with specific stem rust resistance genes. An 18 chromosome barley was developed, which may exhibit agronomic advantages over existing 14 chromosome barley. *In situ* hybridization techniques were utilized to physically map molecular markers to chromosomes. With this information, differences were established between recombinational maps and true physical locations of RFLP's (Restriction Fragment Length Polymorphisms)(of wheat and rye), which indicated the presence of "hot" and "cold" spots of recombination along chromosome arms. This information is extremely valuable for scientists working on plant transformation.

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Molecular biology offers powerful approaches to plant improvement and ARS cereal scientists are at the forefront. Among their accomplishments are: 1) developing DNA probes for rice cultivar and germplasm identification, 2) developing an oat tissue culture system suitable for *in vitro* gene transfer, 3) producing a seed cDNA library which can be used to detect antifungal protein genes, 4) demonstrated, through the similarity of gene arrangement among grass species, that the convergent domestication of maize, sorghum and rice appears to be due to mutations of major gene loci; thus, showing that mapping data developed in one crop is applicable to other crops, and 5) identified root specific and spike specific ethylene probes—allowing the study and improvement of root health and grain production.

Finally, one of the most exciting “targets of opportunity” for cereal researchers is to design crops for specific uses. It may be informative to present such ARS accomplishment in more detail, as follows:

Discovery and development of non-lethal maize, barley, and rice “low phytic acid” (LPA) mutants.

This pioneering research has demonstrated that the fraction of grain total phosphate that is “nutritionally available” in non-ruminant diets is greatly increased in LPA grain. Methods and technologies are under development to facilitate utilization of these mutants in crop breeding and agricultural production.

Isolation of LPA mutants confirms “Mendelian” inheritance of seed phosphorus and mineral storage processes; provides the first genetic resources for study of seed phosphorus and mineral storage processes, including phosphorus homeostasis during seed development and germination; provides the first genetic evidence that phytic acid is not an essential component of seeds and provides first genetic identification of genes important to phytic acid synthesis; and provides the first genetic resources necessary to study the role of phytic acid in human and animal nutrition and health.

This research has been conducted over the past decade and is now coming to fruition through technology transfer to private industry and facilitation of new levels of nutritional research.

Poultry, swine, and fish production using LPA grain will be less expensive, more efficient, and have a reduced impact on the environment. In addition to improvement in the efficiency of agricultural production, competitiveness of domestic producers in the international marketplace will be enhanced. This work may also lead to improved human nutrition and health in those countries or populations for whom cereal crops are staple foods.

Companies representing well in excess of 50 percent of the domestic hybrid corn seed production are obtaining licenses to use the LPA mutants and related technology to develop “low phytic acid” corn.

Question. What is your current funding and staffing by location? Does the fiscal year 1998 budget propose decreases for small grains research? Explain.

Answer. The overall fiscal year 1998 budget proposes an increase in research funding for small grains of \$685,000. The current funding and staffing by location follows:

WHEAT RESEARCH

Location	Fiscal year 1997—	
	Funds	Scientists
Albany, CA (PGECC)	\$307,700	0.3
Albany, CA (WRRCC)	4,086,400	14.4
Riverside, CA	143,000	.6
Ft. Collins, CO	284,400	.5
Newark, DE	142,700	.5
Gainesville, FL	718,400	2.3
Athens, GA	1,288,600	4.8
Aberdeen, ID	569,000	1.2
Peoria, IL	3,099,100	10.6
Urbana, IL	59,300	0.2
W. Lafayette, IN	1,166,500	4.7
Manhattan, KS	4,417,900	17.0
Beltsville, MD	1,265,200	3.9
Frederick, MD	377,200	.8

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WHEAT RESEARCH—Continued

Location	Fiscal year 1997—	
	Funds	Scientists
Morris, MN	140,600	.5
St. Paul, MN	990,500	4.7
Columbia, MO	256,100	1.1
Stoneville, MS	65,500	0.2
Sidney, MT	189,800	0.7
Raleigh, NC	166,300	.9
Fargo, ND	1,367,000	5.7
Mandan, ND	353,200	1.1
Lincoln, NE	932,600	4.2
Geneva, NY	54,000	.....
Ithaca, NY	636,600	2.4
Wooster, OH	625,000	2.2
El Reno, OK	412,300	0.5
Stillwater, OK	1,103,700	3.9
Corvallis, OR	214,800	1.0
Pendleton, OR	561,000	2.5
Brookings, SD	169,000	.7
College Station, TX	86,500	.4
Lubbock, TX	127,700	.4
Temale, TX	62,800	.3
Logan, UT	29,600	.2
Pullman, WA	2,335,300	7.2
Montpellier, FR	135,800	.5
Headquarters	488,800	.....
Total	29,429,900	103.1

OAT RESEARCH

Location	Fiscal year 1997—	
	Funds	Scientists
Albany, CA	\$237,200	0.6
Newark, DE	33,200	.1
Aberdeen, ID	668,000	2.0
Urbana, IL	148,300	.5
W. Lafayette, IN	27,600	.1
Ames, IA	146,400	.8
Beltsville, MD	42,200	.1
St. Paul, MN	563,300	1.9
Ithaca, NY	117,700	.5
Raleigh, NC	223,600	1.0
Fargo, ND	205,200	1.1
Madison, WI	309,100	1.3
Montpellier, FR	90,500	.3
Total	2,812,300	10.3

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BARLEY RESEARCH

Location	Fiscal year 1997—	
	Funds	Scientists
Albany, CA	\$532,500	1.4
Newark, DE	33,200	0.1
Athens, GA	42,300	.2
Aberdeen, ID	621,700	2.0
Urbana, IL	89,000	.3
W. Lafayette, IN	82,700	.3
Beltsville, MD	42,200	.1
St. Paul, MN	50,900	.2
Sidney, MT	106,200	.4
Ithaca, NY	65,800	.2
Raleigh, NC	21,800	.1
Fargo, ND	447,700	2.2
Stillwater, OK	436,000	1.6
Pullman, WA	96,700	.5
Madison, WI	790,000	2.9
Montpellier, FR	90,500	.3
Total	3,549,200	12.8

RICE RESEARCH

Location	Fiscal year 1997—	
	Funds	Scientists
Stuttgart, AR	\$911,000	4.0
Albany, CA	441,200	1.3
Davis, CA	166,800	1.0
Riverside, CA	22,200	.....
Gainesville, FL	382,700	1.4
Athens, GA	340,100	1.2
Aberdeen, ID	194,900	0.5
Manhattan, KS	290,200	1.2
New Orleans, LA	1,373,700	5.4
Beltsville, MD	408,300	1.3
Frederick, MD	145,600	.5
St. Paul, MN	128,700	.4
Geneva, NY	54,000	.....
Ithaca, NY	50,500	.2
Mayaguez, PR	25,400	.....
Beaumont, TX	969,500	3.3
College Station, TX	86,500	.3
Houston, TX	182,500	.2
Madison, WI	42,500	.2
Total	6,216,300	22.4

NEW USES RESEARCH

Question. ARS carries out a major effort in research to find new uses and process for agricultural commodities. Please identify by location, the research and funding for fiscal year 1997 and 1998 in this area.

Answer. The focus of the ARS new uses research program is to enhance U.S. economies through the development of value-added food and industrial (nonfood and biofuels) products for domestic and export markets. The fiscal year 1997 and 1998

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funding for the ARS value-added food, nonfood, and biofuels research by location follows:

NEW USES RESEARCH FUNDING FISCAL YEAR 1997

Location	Nonfood	Food	Biofuels	Total
Phoenix, AZ	\$771,100	.....	.....	\$771,100
Albany, CA	3,282,900	\$4,942,200	\$316,700	8,541,800
Fresno, CA	69,900	311,300	.....	381,200
Orlando, FL .....	.....	144,800	.....	144,800
Winter Haven, FL	213,300	1,182,300	.....	1,395,600
Athens, GA	488,800	3,275,900	.....	3,764,700
Dawson, GA .....	.....	753,800	.....	753,800
Hilo, HI	315,100	.....	.....	315,100
Ames, IA	128,000	.....	.....	128,000
Peoria, IL	13,648,200	2,940,500	2,872,700	19,461,400
Manhattan, KS .....	.....	2,500,900	.....	2,500,900
New Orleans, LA	9,668,200	3,586,700	.....	13,254,900
Beltsville, MD .....	.....	2,434,800	.....	2,434,800
East Lansing, MI .....	.....	150,400	.....	150,400
Oxford, MS	882,800	245,600	.....	1,128,400
Poplarville, MS .....	.....	25,600	.....	25,600
Stoneville, MS	1,689,200	.....	.....	1,689,200
Sidney, MT	111,500	.....	.....	111,500
Clay Center, NE .....	.....	286,700	.....	286,700
Lincoln, NE .....	.....	88,200	.....	88,200
Las Cruces, NM	1,068,900	.....	.....	1,068,900
Raleigh, NC .....	.....	1,280,400	.....	1,280,400
Fargo, ND .....	.....	1,754,900	.....	1,754,900
Wooster, OH .....	.....	571,700	.....	571,700
Lane, OK	150,800	881,200	.....	1,032,000
Wyndmoor, PA	5,326,000	6,801,700	2,039,200	14,166,900
Clemson, SC	1,089,700	.....	.....	1,089,700
Beaumont, TX .....	.....	148,300	.....	148,300
College Station, TX	37,700	.....	.....	37,700
Lubbock, TX	536,400	.....	.....	536,400
Weslaco, TX	343,900	531,200	.....	875,100
Pullman, WA	93,500	759,900	.....	853,400
Wenatchee, WA .....	.....	808,900	.....	808,900
Madison, WI	154,100	545,200	.....	699,300
NAL	9,000	.....	.....	9,000
Headquarters	106,900	.....	.....	106,900
	40,185,900	36,953,100	5,228,600	82,367,600

NEW USES RESEARCH FUNDING FISCAL YEAR 1998 (PROPOSED)

Location	Nonfood	Food	Biofuels	Total
Phoenix, AZ	\$771,100	.....	.....	\$771,100
Albany, CA	2,135,600	\$4,243,900	\$316,700	6,696,200
Fresno, CA	21,700	311,300	.....	333,000
Orlando, FL .....	.....	144,800	.....	144,800
Winter Haven, FL	213,300	1,182,300	.....	1,395,600
Athens, GA	488,800	2,910,300	.....	3,399,100
Dawson, GA .....	.....	753,800	.....	753,800
Hilo, HI	315,100	.....	.....	315,100
Ames, IA	128,000	.....	.....	128,000
Peoria, IL	12,706,700	2,651,500	2,872,700	18,230,900
Manhattan, KS .....	.....	2,500,900	.....	2,500,900
New Orleans, LA	9,668,200	3,586,700	.....	13,254,900
Beltsville, MD .....	.....	1,980,700	.....	1,980,700
East Lansing, MI .....	.....	150,400	.....	150,400
Oxford, MS	882,800	245,600	1,128,400
Poplarville, MS	25,600	25,600
Stoneville, MS	1,197,700	1,197,700

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NEW USES RESEARCH FUNDING FISCAL YEAR 1998 (PROPOSED)—Continued

Location	Nonfood	Food	Biofuels	Total
Sidney, MT	111,500	.....	.....	111,500
Clay Center, NE .....	.....	286,700	.....	286,700
Lincoln, NE .....	.....	88,200	.....	88,200
Las Cruces, NM	1,068,900	.....	.....	1,068,900
Raleigh, NC .....	.....	777,400	.....	777,400
Fargo, ND .....	.....	1,754,900	.....	1,754,900
Wooster, OH .....	.....	571,700	.....	571,700
Lane, OK	150,800	881,200	.....	1,032,000
Wyndmoor, PA	4,634,500	6,801,700	2,039,200	13,475,400
Clemson, SC	1,089,700	.....	.....	1,089,700
Beaumont, TX .....	.....	148,300	.....	148,300
College Station, TX	37,700	.....	.....	37,700
Lubbock, TX	536,400	.....	.....	536,400
Weslaco, TX .....	.....	531,200	.....	531,200
Pullman, WA	93,500	692,700	.....	786,200
Wenatchee, WA .....	.....	808,900	.....	808,900
Madison, WI	154,100	545,200	.....	699,300
NAL	9,000	.....	.....	9,000
Headquarters	106,900	.....	.....	106,900
	36,522,000	34,575,900	5,228,600	76,326,500

Question. Please explain the recent accomplishments derived from this research.
Answer. Selected examples of accomplishments in developing value-added products and processes in each of the categories follow:

Valuable protein products from solid tannery waste.—The land filling of chromium-containing solid waste generated during the manufacture of chrome-tanned leather has become a world-wide problem. ARS scientists at the Eastern Regional Research Center (ERRC), Wyndmoor, Pennsylvania, have developed two processes to treat this waste as an alternative to land filling. The products isolated from these treatments are a recyclable chromium cake and protein products of varying characteristics and quality. To make these processes economically viable, end uses need be found for the protein products. At present, the ERRC researchers are examining the functional properties of the protein—adhesiveness, foamability, oil and water absorption, and emulsification capacity. Evidence of worldwide concern about the problem and the remedy includes ongoing cooperative agreements with ATO-DLO in the Netherlands for modification of the protein; with Ramon Llull University in Barcelona, Spain, for process improvements and for chrome recycling; and with University of Brno, Zlin, Czech Republic, for studying the protein properties and for development of an industrial scale treatment plant.

Animal fats, restaurant grease and vegetable-oil refining waste as biodiesel feedstocks.—ARS researchers at the Eastern Regional Research Center, Wyndmoor, Pennsylvania, are using nature's enzymes in new approaches to make biodiesel. The enzymes allow conversion of three feedstocks that are cheaper than conventional vegetable oil: animal fats, restaurant greases, and soapstocks. The high content of free fatty acids in these feedstocks obviates conventional conversion technology. The enzyme process with branched alcohols as co-feedstocks enhances the cold-temperature properties of the biodiesel. A Cooperative Research and Development Agreement among ARS, the DoE's National Renewable Energy Laboratory (NREL) and the Fats and Proteins Research Foundation promotes the development and transfer of this technology and cost engineering to optimize the economics of the new process. Since the cost of feedstock for conventional biodiesel is 75 percent of the manufacturing cost of the fuel, the importance of using cheaper feedstocks is significant.

Biodegradable polyesters produced by bacteria growing on fats and oils.—ARS researchers at the Eastern Regional Research Center (ERRC), Wyndmoor, Pennsylvania, are investigating the conversion of fats and oils into biodegradable plastics called polyhydroxyalkanoates (PHA's). Industry has produced PHA's from other agricultural feedstocks, but ERRC's use of selected bacteria on fats and oils results in polymers with unique properties—elastomers and intermediates that can be further modified chemically for even new types of plastics. The ERRC research is multidisciplinary, including molecular and microbiology, organic chemistry, and materials engineering; Collaborating with the University of Massachusetts (Lowell and Amherst).

“Amazing Gum”: A valuable food and industrial gum made from corn processing byproducts.—A novel process has been developed by ARS scientists at the Eastern Regional Research Center in Wyndmoor, Pennsylvania, to produce a valuable polysaccharide (gum) from corn fiber, an abundant but under-utilized byproduct of the corn wet-milling industry. About 1.5 pounds of Amazing Gum can be produced from the corn fiber derived from one bushel of corn, so vast quantities are potentially available. Amazing gum has properties which suggest numerous uses in foods as a soluble dietary fiber, a thickener, an emulsifier and a “home grown” replacement for imported Gum Arabic. Potential industrial uses include natural adhesives and water-based functional ingredients for coatings and paints. A U.S. patent for the corn fiber gum process has been filed and a Cooperative Research and Development Agreement with a major food and specialty chemical company is being finalized to facilitate commercialization of the new technology.

Nutritious restructured fruit snacks.—Utilization and consumption of many fruit and vegetable crops are constrained by their short harvest seasons and limited market outlets. ARS scientists at the Western Regional Research Center in Albany, California, have developed new technologies to increase utilization and consumption of fruits and vegetables. Novel extrusion and molding technologies are used to produce convenient, value-added restructured fruit and vegetable products from bulk-processed ingredients. These technologies make use of concentrated fruit and vegetable purees as starting materials. Novel, convenient and nutritious products have been developed as a means to supplement the fruit and vegetable component of a healthy diet in accordance with the USDA recommended guidelines. U.S. growers and processors would benefit from this research through increased utilization and consumption of their crops, extended processing periods for seasonal crops and improved production efficiencies.

Life-threatening allergies to latex products can be avoided using a novel latex.—The latest studies suggest that more than 20 million Americans now are affected by “latex allergy,” which is triggered by many of the proteins present in latex products, and a number of deaths from anaphylaxis have occurred. Even highly purified products, made from commercially available Hevea (natural rubber) latex, are unsafe for use by hypersensitive people. Scientists at the Western Regional Research Center in Albany, California, have found a way to produce hypoallergenic latex products from guayule, a domestic rubber-producing plant species. The new latex has successfully passed medical trials and processing scale-up, and a U.S. patent has been obtained. Prototype latex products have been manufactured and tests by FDA scientists showed that guayule latex examination gloves are impermeable to viruses. Commercialization efforts are initially aimed at the very high margin medical products market with over 300 natural rubber medical devices. A license to this technology has been granted to Yulex, Inc. of Philadelphia, Pennsylvania.

Lightweight concrete containing starch.—Lightweight, insulative concrete is used in the building industry for non-structural applications such as for roof tiles, floors and as insulation around fireplaces. Traditional methods of making lightweight concrete require either expensive air entraining equipment or a source of lightweight aggregate that may be in limited supply and obtained at a cost to the environment. Scientists at the Western Regional Research Center in Albany, California, have developed a method of making lightweight concrete using wheat starch. The wheat starch has the appearance of sand and is hydrated before being mixed into the concrete. Concrete with varying densities, strengths and insulative properties have been made using the starch method. Starch is a renewable resource that is in abundant supply and could provide a viable alternative to lightweight aggregate for making lightweight concrete. A patent has been issued for this technology and licensees are being sought.

Zero calorie substitute for fat.—It is well recognized that the average American diet is too high in fat and too low in fiber. New ARS technology should help alleviate both problems. Z-trim, invented by an ARS scientist in Peoria, Illinois, is a high-fiber, zero calorie fat and/or flour substitute.

The product is made from seed byproducts (bran, hulls, etc.) of commodity grains, such as corn or oat, and is suitable for use in many food items. For example, a lunch of Salisbury steak, mashed potatoes with gravy, broccoli with cheese sauce, Waldorf salad, and two brownies, all containing Z-trim, has a total of 600 calories removed and 3.9 grams of fiber added compared to the same lunch without Z-trim.

New starch-based biodegradable plastics.—“The costs for producing biodegradable plastics can be greatly reduced when inexpensive starch is used as an ingredient. Until now, however, the resulting starch-containing materials often had poor properties and were not useful for most commercial applications.” Scientists at the National Center for Agricultural Utilization Research (NCAUR) in Peoria, Illinois, have developed new biodegradable plastic materials based on starch and novel polyesters.

Under a CRADA with the Biotechnology Research and Development Corporation (BRDC), NCAUR and BRDC scientists have devised new materials with properties similar to commercial plastics such as polystyrene, but with starch contents much greater than previously achieved. The high starch content makes these materials more cost competitive than synthetic biodegradable materials with comparable performance characteristics. These materials offer biodegradable alternatives to synthetic plastics currently used in disposable applications such as cups, utensils, and food service trays. This technology has recently been licensed by a major U.S. company with plans to commercialize within the fiscal year.

Discovery of new enzyme for lower cost biofuels.—The research for lower cost raw materials for the production of biofuels has led to increasing interest in the enzymatic breakdown of cellulosic biomass to fermentable sugars. Scientists at the National Center for Agriculture Utilization Research, Peoria, Illinois, have discovered several unique enzymes from yeast that are free from product and substrate inhibitions and work best at high temperatures. These improved properties are the desired attributes of an enzyme suitable for commercialization and should lower the cost of producing fuel alcohol.

Seed yields in Vernonia galamensis doubled by improvement in seed retention.—Vernonia is a potential oilseed crop for the American farmer, with uses in paints and coatings industries. Seeds produced at the beginning and middle of the growing season were previously lost by harvest time. A new trait, developed by ARS scientists at Phoenix, Arizona, keeps seeds on the plant longer, resulting in more seeds at harvest. As yields are increased in this crop, it becomes a more economically-viable option for commercialization. Production of new crops results in diversification, which leads to farm stability and sustainability for agriculture.

Facile dyeing process for blends of wool and cotton.—Wool-cotton blends have been shunned by the textile industry because of difficulties in dyeing to “union” shades, where dye uptake is uniform from one fiber to the other. Agricultural Research Service researchers at the Eastern Regional Research Center, Wyndmoor, Pennsylvania, have optimized their pretreatment protocol for these blends, whereby the cotton component is made chemically similar to wool in its ability to take up dye. The protocol involves pretreatment with commercial agents called dye fixatives. The ARS process should give the public an excellent, all-natural, trans-seasonal fabric with excellent comfort and appearance qualities, and should provide a new market for domestic wool and cotton. A CRADA with the American Sheep Industry Association and Cotton, Inc. seeks to demonstrate the technology and promote its adoption by the American textile industry as a new use for both agricultural fibers.

Computerized process control for cotton gins increases monetary income to farmers and improves cotton quality.—Scientists at the Cotton Ginning Research Unit at Stoneville, Mississippi, developed and implemented a computerized and automated system to automatically measure the quality of cotton at various stages of gin processing and automatically select and route the cotton through the optimum machine sequence. One commercial gin has been fully automated and two others are partially automated. Application of the Computerized Process Control Systems (CPCS) will improve fiber quality substantially and increase farmer profits \$10 to \$20 per bale with a potential impact of \$400 million annually. The CPCS includes new automated bypass valves (patent applied for), automated calibration devices (patent applied for), automated sample collection and analyses hardware (three patents awarded), and associated software. Key components of the CPCS have been licensed to an international company for marketing in 1998.

New process for preserving fresh-cut pears shows promise.—Fresh sliced pears are subject to rapid browning, tissue breakdown, and microbial spoilage which have, heretofore, prevented the development of a fresh-cut product. By optimization of fruit ripeness for fresh-cut applications, use of novel browning inhibitor formulations, and special packaging in a modified atmosphere, scientists at the Eastern Regional Research Center, Wyndmoor, Pennsylvania, have overcome these problems with two key pear varieties, d’Anjou and Bartlett, attaining a shelf-life of 2–3 weeks at 4 °C. Work is in progress to establish the feasibility of the new process for commercial use.

Extending the shelf life of fresh and low temperature pasteurized citrus juices.—The marketing of fresh citrus juices is severely restricted due to the presence of an enzyme that clarifies the juice. Consumers perceive this as a serious quality defect. The same enzyme may also cause gelation of frozen concentrated citrus juice and flocculation in drinks containing citrus juice. Scientists at the U.S. Citrus and Subtropical Products Research Laboratory, Winter Haven, Florida, have discovered that a form of the enzyme present in citrus fruit peel causes the most rapid juice cloud destabilization. A Cooperative Research and Development Agreement has been established with a major producer of machinery used to extract juice from citrus fruit.

This collaboration between ARS scientists and private industry is designed to determine if methods of juice extraction can be developed to decrease the amount of the detrimental peel enzyme in juice, extending the shelf life, and increasing the geographic market area for fresh citrus juices.

Corn Fiber Oil as a Natural Cholesterol-Lowering Product.—ARS Scientists at the Eastern Regional Research Center, Wyndmoor, Pennsylvania, and the National Center for Agriculture Utilization Research, Peoria, Illinois, have developed a process to extract a new natural oil from corn. Unlike conventional corn oil, which is extracted from corn “germ,” corn fiber oil is extracted from corn “fiber,” which is a low-valued by-product of the industrial processes that convert corn into sweeteners, starch, and other products such as fuel-grade ethanol. Collaborative studies with scientists at the University of Massachusetts, Lowell, have confirmed that corn fiber oil significantly lowers total serum cholesterol and LDL cholesterol (“bad” cholesterol) in hamsters. The active cholesterol-lowering component may be an unusual compound called “sitostanol-ferulate” which comprises about 6 percent of the oil. The natural sitostanol-ferulate in corn fiber oil may lower serum cholesterol in the same way as a popular new synthetic Finnish Margarine-type product called “Benecol,” which sells for five to ten times the price of regular margarine. ARS has applied for a U.S. patent on this new technology and licensing negotiations with major U.S. food companies are now being conducted.

Commercialization of this new technology will result in new uses for agricultural byproducts, more revenue for processors and growers, and new healthful food products for consumers.

New Fat Replacer.—ARS scientists at the Southern Regional Research Center in New Orleans, Louisiana, have developed a process for making a new low-calorie fat replacer from rice flour. This white-colored, all natural rice-based product looks and feels like hydrogenated fat. It can be used in non-frozen, fat-free or dairy-free products like yogurt, cream cheese, sour cream, and whipped cream. A patent on this discovery is currently being sought and a Cooperative Research and Development Agreement is being negotiated with a U.S. company in order to commercialize the new technology.

Anticancer compounds derived from citrus-processing byproducts.—A collection of nearly 200 compounds derived from citrus peel and various citrus peel byproducts were submitted to the National Cancer Institute for testing for anti-HIV and anticancer characteristics. A number of these compounds have been shown in a second study to have strong anticancer characteristics against several types of cancer cell lines, especially, breast cancer cell lines. ARS scientists at the U.S. Citrus and Subtropical Products Laboratory in Winter Haven, Florida have isolated a number of additional compounds with structural similarities to these active compounds, and these additional compounds have also been submitted to a second study. Although the National Cancer Institute has completed the screening on only a small percentage of the submitted compounds, one compound, a synthetic analogue of a naturally-occurring citrus flavonoid, has been shown to have significant characteristics against a number of cancer cell lines, and has been selected for animal trials. Based on the similarities between this compound and others submitted, but not yet tested, more compounds are expected to be selected for further study by the National Cancer Institute. These findings are contributing to our knowledge of the link between improved human health and nutrition and will also lead to important new uses for citrus byproducts.

Question. How many cooperative partnerships with industry have resulted from research in this area?

Answer. Since 1995, of the 56 licenses that have been issued on ARS technologies, 21 relate directly to “value-added” products derived from agricultural commodities. This classification excludes genetic engineering technologies, pest control alternatives, diagnostic tests, etc. Of the CRADA’s issued since 1992, 37 deal specifically with non-food value-added products and another 15 deal with new food products. Another 180 CRADA partnerships deal with technologies that will enhance production, quality, and profitability of crop and animal commodities, thus increasing the quantity of economical agricultural-based raw materials for the creation of new value-added products and additional market opportunities. These partnerships have also led to the successful development of new products that have contributed to the change in U.S. exports from bulk commodities to value added products.

Question. What are the prospects for further accomplishments?

Answer. The prospects for further accomplishments are excellent. ARS has adopted a market-rational approach to the development of value-added products in which market requirements for cost, performance, and functional properties must be clearly understood and the product developed must be equal to or better than the product it is displacing. Preference is given to development of new products that displace

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imported rather than domestically produced ones in order to further enhance the U.S. balance of trade. ARS has developed a unique cost engineering and analysis program at the Eastern Regional Research Center, Wyndmoor, Pennsylvania, to assist ARS researchers in their product/process development goals. ARS is further committed to the concept that early involvement of industry is key to rapid development of value-added products, to successful development of new business opportunities, and to the creation of new jobs.

Question. Over the past ten years, how much money has ARS redirected into new uses research?

Answer. Since fiscal year 1988, ARS has redirected approximately \$21 million into new uses research. In addition to the redirections, ARS received an increase of \$4.3 million for new uses research in fiscal year 1994.

NURSERY CROPS RESEARCH

Question. Where does ARS conduct its nursery crops research? Please describe the program and funding for each location.

Answer. Nursery crops research is funded at 12 locations. A summary of project activities and funding for each location follows:

<i>Location</i>	<i>1997 Funding</i>
Washington, DC	\$5,273,900
Miami, FL	56,200
Montpellier, FR	89,400
Tifton, GA	76,500
Peoria, IL	92,400
Ames, IA	128,000
Beltsville, MD	462,200
Wooster, OH	402,700
Corvallis, OR	654,300
Logan, UT	20,700
Yakima, WA	14,900
Headquarters	210,100
 Total	 7,481,300

Washington, DC.—(1) Evaluate new floral crops and determine the effects of cultural practices on growth and flowering; (2) develop new methods to improve floral and nursery crops with enhanced flower color and disease resistance utilizing biotechnology; (3) select, evaluate, and develop cultivars of new trees and shrubs with improved growth habits and stress tolerance; (4) develop biologically-based alternatives to methyl bromide; (5) develop new approaches for disease control utilizing techniques of molecular biology in characterizing plant viruses; (6) identify biologically active natural products for insect control; (7) conduct efficacy and phytotoxicity tests to develop data in support of expansion of labels for minor use pesticides; (8) collect, identify and establish woody and herbaceous plants for public display; and (9) establish, develop, operate, and maintain an educational center for gardens and collections.

Miami, FL.—Introduce, preserve, distribute and evaluate tropical and subtropical fruit and ornamental plants.

Montpellier, France.—Discover, collect, and determine the potential for biocontrol agents in controlling sweetpotato whitefly and export those with promise to the quarantine facility in the U.S. for distribution to the research community.

Tifton, GA.—Evaluate the effectiveness and phytotoxicity of nematocides, fungicides, herbicides, insecticides, and acaricides for control of nematodes, diseases, weeds, insects and mites in minor use pesticide evaluation on ornamental and food crops.

Peoria, IL.—Develop low-cost culture techniques for producing fungal and bacterial biocontrol agents and enhance viability of the microorganisms in storage.

Ames, IA.—Obtain performance data and/or residue samples in support of minor-use pesticides registration for pesticide use on ornamental specialty and food crops.

Beltsville, MD.—(1) Integrate practices to improve soil/crop health by analyzing interactions of biological and physical properties of organic amendments, and combine the use of biocontrol agents and organic amendments to increase crop tolerance to water, nutrient and pathogen stress; (2) identify microorganisms with potential for control of soilborne pathogens and transfer technology to industry; (3) conduct research on biocontrol of gypsy moth and turf insects; (4) develop and evaluate new methods for detection of phytoplasmas; (5) develop and coordinate uniform evaluation trials of turfgrass varieties.

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Wooster, OH.—Reduce damage and crop losses caused by selected insect pests of horticultural, turf and ornamental crops by developing alternative management strategies for pest control.

Corvallis, OR.—(1) Investigate factors affecting seed quality and optimum production of forage and turf grass; (2) determine the effects of biocides on mycorrhizal fungi and produce new strains of these fungi resistant to biocides for possible use as an alternative to methyl bromide soil fumigation; (3) characterize changes in gene expression and levels of growth hormone in relation to flower induction; (4) investigate the distribution of products of photosyntheses in selected horticultural plants with and without mycorrhizal fungi associated with the roots; (5) develop technology to identify beneficial organisms to apply to roots to reduce stress and reduce disease severity; and (6) evaluate various fungicides, insecticides and herbicides for efficacy and phytotoxicity in support of floral and nursery crops label expansion through the IR-4 minor-use pesticide regional project.

Logan, UT.—Evaluate and define existing turfgrass germplasms and characterize the genetic diversity to enhance germplasms with desirable traits for use by plant breeders.

Yakima, WA.—Provide efficacy, phytotoxicity and yield data and residue samples for analyses to support registration or reregistration of minor use pesticides for control of insect pests.

Headquarters.—Support minor use pesticide registration.

Question. What major accomplishments have come from your research in this area?

Answer.

Washington, DC.—Introduced more than 100 new trees and shrubs during the past 70 years since the National Arboretum was established. The Arboretum has developed a wide range of plants with superior landscape qualities that are more disease and cold resistant and tolerant to urban stresses. For example, the Bradford pear introduced from the Arboretum is among the 10 most widely planted ornamental trees in the U.S. Other introductions include improved horticultural forms of crape myrtle, firethorn, viburnum, elm, magnolia, and holly. In addition, new flower introductions include lisianthus, kangaroo paw, ornithogalum and clematis for pot plant production. Many of these introductions are now produced and utilized nationwide and some introductions have been distributed abroad.

Miami, FL.—Collections of avocado, mango, carambola, passionfruit and other tropical and subtropical fruits are maintained for use in ARS research programs in plant improvement through breeding and improvement of post-harvest quality for domestic use as well as export.

Peoria, IL.—Molecular techniques have been applied in developing improved methods of classification of fungi and bacteria that will enhance the utilization of these organisms as biocontrol agents.

Montpellier, France.—Approximately 25 natural enemies of the sweetpotato whitefly have been brought to the U.S. and five have been released in Texas, California and Florida for control of the insect.

Tifton, GA and Ames, IA.—Support of minor-use pesticide registrations is a critical need of industry and is an integral part of pest and disease control procedures utilized by growers and processors to reduce crop loss and maintain high quality products.

POULTRY DISEASE (PEMS) RESEARCH

Question. An increase of \$100,000 above the fiscal year 1996 level was provided for fiscal year 1997 for ARS poultry enteritis and mortality syndrome research. Where is this research being carried out and what have been the results of your research on this disease to date?

Answer. The fiscal year 1997 increase was allocated to the ARS Southeast Poultry Research Laboratory at Athens, Georgia where poultry enteritis and mortality syndrome research is carried out. Collaboration with the College of Veterinary Medicine at North Carolina State University has been established. Experiments to determine what agents are present in the infected samples, but absent from controls, are in progress.

AIR QUALITY (PM-10) RESEARCH

Question. Where does ARS perform Air Quality (PM-10) research. Please describe the program, funding, and staffing by location.

Answer. At Pullman, Washington, 1.3 scientist years (SY's) and \$480,500 are allocated to PM-10 and PM-2.5 research. One component of the research is directed to understanding the physics of particulate emissions from agricultural fields during

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field operations and wind storms. Another component is determining where particulates caught in samplers have originated. The third component is directed to developing methods for reducing particulate emissions.

At Manhattan, Kansas, 1.0 SY and \$167,700 are allocated to research on PM-10 and PM-2.5 particulate physics and on developing a PM-10 and PM-2.5 module for inclusion in a wind erosion model (Wind Erosion Prediction System—WEPS). The latter will be used to select, from among alternative land treatments, the most appropriate treatments for controlling wind erosion and particulate emissions.

At Lubbock, TX, 1.7 SY and \$319,500 are allocated to field measurement and documentation of particulate fractions during wind erosion events.

Question. What major accomplishments have come from your research in this area?

Answer. a) Considerable progress has been made in identifying the physics of PM-10 emissions during weathering, tillage, traffic, and abrasion by wind-blown soil clods. b) Progress has also been made in establishing typical emission rates under field conditions for various tillage practices. c) The PM-10 module for inclusion in the wind erosion model has been coded, but still needs validation; and d) A scientist in Pullman, WA, has developed a biologically-based method for assaying the sources of particulates (i.e. where do particles come from—agricultural fields, roads, parking lots).

Question. Is the ARS research effort in this area connected at all to the San Joaquin Valley PM-10 study funded through the CSREES or is that separate and apart from the ARS program?

Answer. The ARS program and the CSREES-administered PM-10 program in the San Joaquin Valley of California are funded separately. However, there is informal coordination, communication, and cooperation between the programs. California personnel participate in the review and planning meetings of the Washington study (which is joint study between ARS, CSREES-administered Washington State University projects, EPA and State of Washington agencies), and ARS and other co-operators in the State of Washington participate in similar California meetings.

NEW CROPS RESEARCH

Question. Provide the Committee with a list of new crops ARS is researching.

Answer. ARS currently conducts research on guayule, vernonia, lesquerella, cuphea, meadowfoam, crambe, jojoba, kenaf, and *Hevea*.

Question. What progress has been made in your research?

Answer. Guayule—*Parthenium argentatum* is a desert shrub that has been grown in Arizona, California, and Texas. Guayule produces natural rubber that has potential markets in non-allergenic products such as latex gloves and condoms, and as a resin for paints and coatings. We anticipate commercial production of hypoallergenic medical products from guayule within the next three to five years building on an ARS patent for latex extraction based on work at Albany, CA. The patent has been licensed by Yulex, Inc. ARS has proved that guayule latex can be manufactured into high-quality latex products and that guayule latex films provide an effective barrier to virus transmission. Through work at Phoenix, AZ, ARS has released six guayule lines selected for improved rubber concentration and yield, and that regenerate following harvest.

Vernonia—*Vernonia galamensis* is native to Africa. Vernonia oil (epoxy oil) has the potential to replace solvents in paints and become part of the finished coating, which reduces air pollution from solvents. The domestication and commercialization of vernonia depends on development of high yielding cultivars and development of reliable agronomic practices. We have developed vernonia plants that grow and flower during the summer in the United States. Further, the harvestable yield of vernonia has been nearly doubled by developing lines with modified bracts in the seed head so that seeds remain on the plant longer.

Lesquerella—*Lesquerella fendleri* is a winter annual that can be grown in the southern United States for its oil, gum, and meal. There is a large potential market for these products, so we expect that several thousand acres could be supported. Barriers to commercialization are the current incomplete development of high oil content, self-pollinating seed, reliable cultural practices, and seed harvesting and cleaning equipment. Basic research is being conducted with the oil to make new molecules with potential as biodegradable detergents, lubricants, and personal care ingredients. We have released three lesquerella lines with increased oil concentration and improved oil composition and developed another line with yellow seeds instead of the normal brown seeds, which reduces oil pigmentation contamination.

Cuphea—*Cuphea viscosissima* is native to the temperate regions of the United States and contains medium chain oils. Cuphea oil has the potential to replace oils

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that are now imported such as coconut and palm oils from tropical regions, (about one billion pounds per year) for use in detergents and other industrial products. We are investigating oil modifications that can lead to new products for niche markets.

Meadowfoam—*Limnanthes alba* is commercially grown in Oregon with 8,100 acres planted for 1997 harvest, double that of a year ago. The economic impact is estimated to the \$5 million. Meadowfoam oil, has been chemically modified to develop potentially new products for the personal care, lubricants, and detergent industries, while the seed meal may have application as a natural preemerge herbicide and nematocide.

Crambe—*Crambe Abyssinia* is grown commercially in North Dakota, with 45,000 acres planted for 1997 harvest. The economic value is estimated to be over \$9 million. We are conducting research to find new products from the oil.

Jojoba—*Simmondsia chinensis* is a perennial shrub that is commercially grown in the desert Southwest for its unique oil. The oil has markets in lubricants and personal care items. More than 2 million pounds of seed were harvested in 1996 with an oil value of \$7.5 million. We have research underway to develop new products from jojoba.

Kenaf—*Hibiscus cannabinus* is an annual fiber crop grown in the southern United States on 3,000–4,000 acres for a number of specialty fiber applications. Fiber separation facilities are in Texas, Mississippi, and Louisiana. Kenaf may have potential as a forage crop as well as a fiber crop. We have conducted research to develop improved varieties and cultural practices and to find new products.

Hevea—*Hevea brasiliensis* is the natural rubber tree, which is the source of the United State's imported natural rubber. We have conducted research to compare the biochemical pathway and enzymes responsible for production of rubber in guayule with those in *Hevea* to better understand how to further modify the rubber produced in guayule.

Question. What benefits have been derived by the marketplace from this research?

Answer. The most striking potential benefit can be shown for rubber production from guayule. The United States retail market for latex gloves was \$3.1 billion in 1993. All natural rubber currently in commercial use is obtained from the Brazilian rubber tree (*Hevea*), a species restricted to the tropics for commercial production. Consequently, the United States is wholly dependent on nondomestic sources for this vital raw material. Furthermore, the recent widespread occurrence of life-threatening "latex allergy" to *Hevea* rubber makes development of an alternative, safe source of natural rubber imperative.

Guayule commercialization has enormous potential. Allergic reactions to *Hevea* rubber have become severe. The first United States' cases appeared in 1988, growing to at least 500,000 by 1992. Estimates suggest that more than 20 million Americans were affected by 1994. This life-threatening allergy has created a major new, high-value market for hypoallergenic natural rubber products throughout the world. A hypersensitive individual must take care to avoid contact with current natural rubber products, which number 40,000, including more than 300 medical devices. Severe reactions have occasionally caused death. The occurrence of "rubber allergy" is not only widespread but may be spreading rapidly, which apparently is due to increased use of latex gloves and condoms in response to the AIDS epidemic. Proteins present in the latex cause the allergy from *Hevea* and technologies have not yet been developed to remove the harmful protein. Latex from guayule does not contain these proteins and does not produce these allergic reactions.

Our research has shown that guayule can be grown profitably for hypoallergenic latex production without a government subsidy. Thus, guayule production would enhance rural development in the southwestern United States. Rural development could be enhanced beyond the benefits to farmers through the concurrent development of local processing facilities and manufacturing plants.

Development of new uses and improved varieties from the other new crops could further diversify American agriculture and aid in rural development. A cooperating company has licensed an ARS patent to make "estolids," a new biodegradable material and is now starting to manufacture new personal care products from meadowfoam based on this technology. Finally, at Peoria, IL, ARS has analyzed 15,000 seeds of new crops for useful oil and protein concentrations and placed this information on the Internet. This information is guiding the development of new crops worldwide.

Question. Please provide the Committee with actual obligations incurred for each line of research last year. What is the current and budgeted funding level for each?

Answer. The obligations incurred and the current and budgeted funding levels for each of these new crops are as follows:

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Crops	Fiscal year—		
	1996	1997	1998
Guayule	\$621,617	\$567,700	\$519,600
Vernonia	160,517	154,200	154,200
Lesquerella	589,801	584,900	584,900
Cuphea	294,689	280,400	280,400
Meadowfoam	101,908	101,600	101,600
Crambe	77,922	77,800	77,800
Jojoba	152,862	152,300	152,300
Kenaf	1,328,338	1,391,700	400,500
Hevea	278,842	.....	.....

KENAF

Question. What is your justification for terminating the Kenaf program at Weslaco, Texas and Mississippi State?

Answer. Kenaf has long been proposed as a source of fiber for production of newsprint. Nonetheless, it has not gained a foothold in the paper making industry or newsprint market. At current low newsprint prices kenaf is unlikely to be produced at an economical cost. Major newsprint producers are committed to wood feedstock, and recycling is increasing in importance, so the future of kenaf for this market is speculative.

The project at Mississippi State, funded through an extramural agreement with ARS, focuses largely on how to produce and harvest kenaf for fiber production. With the speculative market ARS can not justify investment in production research for kenaf fiber. In Weslaco, TX, ARS fulfilled its mission by developing nematode-resistant varieties. Entrepreneurs there are satisfied with the varieties, and are now concentrating on establishing a vertically-integrated industry to reduce costs and improve efficiency.

Question. Where else does ARS perform research on Kenaf?

Answer. In addition to Weslaco and Mississippi State, kenaf research is performed at College Station, TX; Lane, OK; New Orleans, LA; and Athens, GA.

Question. Provide funding and staff years for fiscal years 1996–1998.

Answer. Funding and staff years for kenaf research are as follows: fiscal year 1996, \$1,651,400, 3.1 SY; fiscal year 1997, \$1,391,700, 3.1 SY; and, proposed for fiscal year 1998, \$400,500, 1.8 SY.

FUNDAMENTAL RESEARCH

Question. How much money does ARS commit for basic research?

Answer. ARS commits \$363,985,000 for basic research, which is approximately one half of the agency's appropriated research funds.

Question. How much of this research is classified as biotechnology research?

Answer. ARS is devoting \$77,439,200 in fiscal year 1997 on biotechnology research as a component of its basic research effort. This amounts to 10.8 percent of the total ARS appropriation.

Question. Please identify current funding for plant genome and animal genome research.

Answer. The current funding is \$3,708,700 for plant genome research and \$7,196,500 for animal genome research.

Question. What portion of ARS' major research activities of Plant Sciences, Animal Sciences, etc., is basic, applied and developmental? Has this changed over the past 10 years?

Answer. The portion of ARS' major research activities of Plant Sciences, Animal Sciences, etc., that are devoted to basic, applied or developmental research follows:

Research activity	Basic	Applied	Developmental
Soil, Water and Air Science	\$43,092,000	\$32,543,000	\$7,707,000
Plant Sciences	123,713,000	93,427,000	22,127,000
Animal Sciences	58,504,000	44,182,000	10,465,000
Commodity Conversion and Delivery	72,638,000	54,856,000	12,992,000
Human Nutrition Research	32,276,000	24,375,000	5,772,000
Integration of Ag Systems	15,343,000	11,587,000	2,745,000

Research activity	Basic	Applied	Developmental
Ag Information and Library Services	18,419,000	.....	.....
Total	363,985,000	260,970,000	61,808,000

The research activities and the distribution by basic, applied and developmental have not varied over the past 10 years.

PLANT GENE EXPRESSION CENTER

Question. What programs are being carried out at the Plant Gene Expression Center? Reflect funding and staff years for fiscal years 1996–98.

Answer. The total funding and scientists for the PGEC in fiscal year 1996 was \$3,145,700 and 5 SY's, fiscal year 1997 \$3,091,300 and 5 SY's, with \$3,091,300 and 5 SY's proposed for fiscal year 1998.

The Plant Gene Expression Center (PGEC) conducts both long-term and short-term research. The long-term fundamental research fills gaps in our scientific knowledge of plant genetics, genetic mechanisms, and genetic modification. The short-term research is focused on solving specific problems by application of basic genetic knowledge to plants. Short descriptions of specific PGEC projects and their accomplishments are provided for the record.

Regulatory genes that alter growth patterns.—Scientists at PGEC are identifying and analyzing regulatory genes that alter the growth patterns in corn. Because the arrangement of genes on the chromosomes in various grass species is so similar, this research on corn might be applicable to other cereals. A gene has been isolated that regulates the number of tillers in a corn plant, a trait that might be useful for rice or forage grass breeding. Through a CRADA with Pioneer Hi-Bred International, a gene that controls the number of individual flowers in a corn inflorescence was characterized. Manipulation of the preceding gene in cereals has the potential to increase yield.

Mutants in pollen-specific receptor-like kinase genes from corn.—Researchers at PGEC are studying how the pollen grain interacts with female tissue during pollination and fertilization; receptor-like kinases are thought to be involved with this interaction and other interactions, such as plants with pathogens. Working with scientists at Pioneer Hi-Bred through a CRADA, PGEC scientists have isolated and characterized pollen-specific kinase genes from tomato and from corn. If these kinases play critical roles in determining pollen-female interactions, plant breeders may try to manipulate them as a new means of controlling pollination and fertilization.

The NSF-DOE-USDA Arabidopsis Genome Project.—The PGEC initiated a large-scale genome sequencing effort for the model plant *Arabidopsis* in conjunction with Stanford University and the University of Pennsylvania. The Genome Sequence Lab of the PGEC has produced 1,000 kilobases of gene sequence data since its recent inception. This project constitutes an international effort for identifying for the first time the genes that are responsible for the entirety of plant form and function.

Improving gene transfer in cereal crops.—The gene transfer process produces unpredictable DNA integration and expression patterns in plants. PGEC scientists are applying novel site-specific recombination technology to wheat transformation to allow for precise DNA integration.

Degrading the compound gossypol.—Scientists at the PGEC have isolated a bacterium that can break down gossypol, a toxic compound in cotton. Current research is underway to identify the genes(s) responsible for gossypol breakdown. Cottonseed free of gossypol could be used for food and feed.

Transgenic plants.—Scientists from the PGEC have developed transgenic plants with a suppressed shade-avoidance response that will yield more grain under crowded field conditions than will non-transgenic plants. Through research such as this on the fundamental biology of the phytochrome (light-detection) system in plants, the productivity of crop plants can be increased without increased application of fertilizers or changes in cultivation practices.

Control of plant tolerance to heavy metals.—Scientists at PGEC are characterizing several genes that affect metal toxicity in plants. Plant genes that confer tolerance to toxic metals may serve as tools for regulating and altering the rate and amount of toxic metal accumulation in plants. The goal of this research is to reduce the accumulation of toxic metals in food plants, and to enhance the rate of toxic metal accumulation in selected other plants so that they can be used for bioextraction of toxic metals from contaminated soils.

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Genic control of cell division in pollen.—Flower development and pollination are critically important to agriculture, because the world's major food crops are the products of seeds, which are the products of flowering. Many aspects of gene regulation during development of pollen grains are poorly understood and therefore genetic manipulation of pollen is difficult. Scientists at the PGEC have characterized genes that control development of a functional pollen grain through a tissue culture maturation system that assesses the relative importance of different types of gene regulation to pollen development. Manipulation of these genes will enable the development of novel pollen ("male-sterility") systems to improve germplasm and to facilitate hybrid seed production.

Control of plant cell growth.—As in animals, plants have hormones that regulate virtually all aspects of growth and development. Ethylene, a plant hormone, triggers ripening and decay of many fruits. Scientists at the PGEC have blocked ethylene synthesis in ripening tomatoes using a DNA-based technique termed "antisense technology." The genetically engineered tomatoes have excellent flavor compared to normal tomatoes, because they can ripen on the plant before picking without spoilage. This discovery has been licensed to the private sector and is being commercialized. Now the scientists are putting their genetic tools to work studying other important metabolic processes governed by auxin. The long-term goal of the investigation is to enhance the value of agronomic products and to enhance crop productivity.

New approaches for isolating resistance genes to potato late blight.—Most plant diseases kill some plants but leave others untouched. Naturally-occurring genes for disease resistance offer huge potential for protecting crops from pathogens to which they are susceptible. The goal of this project is to transfer highly effective disease resistance genes into crops that suffer disease problems. Scientists at the PGEC previously isolated the tobacco mosaic virus resistance gene N from tobacco. The genetic material of tobacco, tomato, and potato are highly similar in content and organization, and homologues to the N gene have been located in a region of the potato genome bearing genes that confer resistance to the fungus that causes potato late blight and to the virus that causes a potato viral disease. This program is currently trying to isolate and determine the sequence of the genetic material near the resistance gene in potato. If successful, this research will have developed an effective approach for the isolation of numerous disease resistance genes of most crops, as well as providing a genetic means of combating diseases that threaten agriculturally-important crops.

PEAS AND LENTILS RESEARCH

Question. Please describe your research effort in peas and lentils research.

Answer. ARS conducts research on genetic improvement of peas and lentils with these efforts concentrated at Pullman and Prosser, Washington. Programs at other locations focus on problems of production and post-harvest issues.

Question. By laboratory, what funds were obligated in fiscal year 1996; what is your current estimate?

Answer. The funding for peas and lentils for fiscal year 1996 and 1997 is as follows:

Location	Fiscal year—	
	1996 obligations	1997 funds
Albany, CA	\$153,046	\$143,500
Beltsville, MD		64,000
Pendleton, OR	14,874	87,600
Prosser, WA	199,224	220,000
Pullman, WA	534,512	478,200
Total	901,656	993,300

Question. How many scientists are involved in Federal/State peas and lentils research?

Answer. The ARS staff for peas and lentils research is 3.3 scientist years.

Question. Does ARS execute cooperative agreements for this research?

Answer. When appropriate, ARS executes cooperative agreements to accomplish some of the goals of this research.

Question. Explain with whom and how much.

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Answer. In 1995, ARS executed a specific cooperative agreement with Ireland on the *Mycosphaerella* blight fungus of peas, and funded it with \$4,500. The purpose was to evaluate resistance of U.S. Plant Introduction accessions of peas where the disease is severe. In 1995, ARS executed a specific cooperative agreement with Washington State University in Mount Vernon, Washington, and funded it with \$12,745 in fiscal year 1995 and \$3,225 in fiscal year 1996. The purpose was to evaluate resistance to the pea cyst nematode in field conditions where the nematode actually occurs.

GRAPE RESEARCH

Question. Please describe your grape research program including your efforts in disease research areas of grape phylloxera and grape virology.

Answer. The ARS grape research program involves efforts to enhance grape germplasm including development of methods to control pests and diseases. Activities include maintenance of a National Clonal Repository for grape germplasm, acquisition, evaluation and distribution of grape germplasm, development of quarantine and postharvest strategies to control arthropod pests, genetic improvement of grape scions and rootstocks, development of alternatives to soil fumigation with methyl bromide, and development of improved cultural practices to improve quality, production efficiency, and pest control.

Grape phylloxera research is conducted on the cause of the death of newly planted phylloxera-resistant rootstocks in young replanted vineyards. This work is focused on the role of grapevine viruses and water mold fungi. Grape rootstocks with resistance to phylloxera and other soilborne pests are being developed by conventional breeding and evaluated. Using biotechnology, new genes providing resistance to soilborne pests are also being introduced into grapes.

Grape virology research involves identifying the causal agents, describing disease spread, and devising control methods for viruses and graft-transmissible pathogens affecting grapevines. This research effort also includes developing specific assays for the rapid detection and identification of the pathogens. Sensitivities of various commercial grape rootstocks to viruses and graft-transmitted pathogens are being investigated.

Question. Where is this research implemented?

Answer. This research is implemented at Geneva, New York; Fresno, and Davis, California; Poplarville, Mississippi; Prosser, Washington and Kearneysville, West Virginia.

Question. Provide actual obligations and staffing for 1996 actual.

Answer. Actual obligations and staffing for fiscal year 1996 for all grape research was \$2,486,750 supporting 7.5 SY's. This included research on grape phylloxera at \$255,777 with 0.6 SY and grape virology at \$222,522 with 0.6 SY.

Question. Provide funding and staffing for 1997 current and fiscal year 1998 estimated for research on grapes.

Answer. Funding in fiscal year 1997 and projected for fiscal year 1998 is \$2,420,600 supporting 7.0 scientists.

HOPS RESEARCH

Question. Please describe your research on Hops.

Answer. Hops research in ARS includes breeding and genetics in the development of new varieties with improved flavor characteristics. In addition, breeding for pest and disease resistance is an important component in the program. ARS also maintains a collection of foreign and domestic hop varieties and breeding germplasm used in the research program.

Question. Whom does ARS cooperate with in this program?

Answer. ARS cooperates with scientists at Washington State University at Prosser and with the University of Idaho in Moscow. Oregon, Washington, and Idaho are the three hop producing states.

Question. Please provide your actual obligations and staffing for 1996.

Answer. Actual obligations in fiscal year 1996 for Hops research was \$374,114. The project was supported by 1.1 scientist years.

Question. Provide funding and staffing for 1997 current and fiscal year 1998 estimated for Hops research.

Answer. ARS Hops research is conducted in Corvallis, Oregon. Funding for fiscal year 1997 is \$388,200 with 1.1 scientist years of support. The same funding and scientist year allocation is projected for fiscal year 1998.

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COOPERATIVE RESEARCH

Question. Describe the programs jointly carried out between ARS and Mississippi State University and the funding involved for fiscal years 1997 and 1998.

Answer. The programs in the form of specific cooperative agreements jointly carried out between the designated ARS locations and Mississippi State University follow. Except where noted, funding for fiscal year 1997 and estimated funding for fiscal year 1998 are the same.

College Station, Texas

- Catfish food safety—\$324,700 (est)
- Classification and database development of sorghum accessions screened for acid soil tolerance—\$2,800 (est)

Mississippi State (Starkville), Mississippi

- Development of the GOSSYM-COMAX systems—\$95,000 (est)
- Insertion of competitor receptors from F strain *Mycoplasma gallisepticum* into *M. gallinarum*—\$55,800 (est)
- Economic returns on inputs for environmental control of poultry houses—\$25,500 (est)

Stoneville, Mississippi

- Research on kenaf in Mississippi—FY 1997: \$418,000 (est); fiscal year 1998: \$0.
- Interaction of herbicides with soil humic materials—\$15,000 (est)

ARS Headquarters

- Impact of Management Systems Evaluation Area on fisheries characteristics and ecology of MS Delta watersheds and oxbow lakes (2)—\$120,900 (est)
- Aflatoxin development in modules during field storage in the Midsouth—\$22,900 (est).

Question. What accomplishments have been generated from these research initiatives?

Answer. Catfish food safety: Treatment of catfish fillets with two percent malic or tartaric acids (naturally-occurring chemicals) extended microbial shelf-life by 6 days, maintained acceptable flavor, and reduced the human pathogen, *Listeria monocytogenes*. A Master-pack system was developed and proven to increase shelf-life of catfish fillets, even after placement above freezing conditions. An application to FDA for approval in catfish and other aquaculture species is pending.

Classification and database development of sorghum accessions screened for acid soil tolerance: 5400 Ethiopian sorghum lines have been screened for acid tolerance in soils in Columbia, South Carolina. Data will be entered in the GRIN database.

Development of the GOSSYM-COMAX systems: Cotton growth has been correlated with tissue potassium content and potassium deficiency in soils from areas of poor cotton productivity. The information is near the final analysis stage and will be disseminated to aid producers, consultants and state extension personnel in providing updated extension bulletins describing potassium deficiency symptoms. This information will be incorporated into the GOSSYM-COMAX decision support model for cotton production.

Insertion of competitor receptors from F strain *Mycoplasma gallisepticum* into *M. gallinarum*: DNA has been prepared from the F strain *Mycoplasma gallisepticum* for use in the construction of DNA libraries. Cytakesin mgcl has been cloned for transformation into the genome of *Mycoplasma gallinarum*.

Economic returns on inputs for environmental control of poultry houses: The effect of environmental temperature on growth and feed conversion in poultry has been determined. This information will be used to ascertain the economic return from changing environmental conditions inside poultry houses.

Research on kenaf in Mississippi: Early breeding and selection studies on kenaf indicate that yield improvements for kenaf in the Midsouth are possible.

Impact of MSEA on fisheries characteristics and ecology of MS Delta watersheds and oxbow lakes: In upland soils with erodible soils and flat slopes of two to six percent, no-till management was highly effective in controlling soil erosion. Cover crops enhanced the effectiveness of no-till production. Yields and profitability of crops with no-till management were equal to or greater than those from conventionally-tilled crops. The project has established five riparian zone sampling sites to evaluate the movement and degradation of herbicides in oxbow lake watersheds.

Aflatoxin development in modules during field storage in the Midsouth: Two modules have been constructed near Corpus Christi, Texas, and two in Yuma, Arizona, where aflatoxin contamination of cottonseed is high. Additionally, two modules have been constructed at Mississippi State, Mississippi. The modules are being used to

study aflatoxin development during field storage of cotton and wheat. The highest concentrations of aflatoxin production to date occurred in 1996 Texas modules and seem to be related to temperature within the modules.

Question. Describe the programs jointly carried out between ARS and University of Mississippi and the funding involved for fiscal years 1997 and 1998.

Answer. The programs in the form of specific cooperative agreements jointly carried out between the designated ARS locations and the University of Mississippi follow. Except as noted, funding for fiscal year 1997 and estimated funding for fiscal year 1998 are the same.

Oxford, Mississippi

- Acoustic detection of insects in field crops—\$176,500 (est)
- Acoustic principles and techniques in soil & sediment research—\$430,100 (est)
- Numerical modeling of soil erosion & transport processes to support the DEC project—\$847,000 (est)
- Transport of sediment by wave power in shallow flow—\$30,000 (est)
- Development of natural products from plants and microbes for replacement of synthetic pesticides—\$165,400 (est).

Headquarters funding

- Role of tension cracks in surface runoff—\$44,700 (est)
- Impact of agricultural MSEA on water quality and ecology of MS Delta watersheds & oxbow lakes—\$40,000 (est)

Beltsville, Maryland

- Remote sensing & associated technology transfer to production agriculture—Fiscal year 1997: \$70,000 (est); fiscal year 1998: \$0

Question. What accomplishments have been generated from these research initiatives?

Answer. Acoustic detection of insects in field crops: Acoustical instruments have been developed for the detection of insect sounds in the soil, on plants, and in the laboratory environment. The instruments are being used in experiments while they are being further developed and refined. Previously unknown sounds made by imported fire ants have been detected. This technology has great potential for sensitive detection of small numbers of insect pests.

Acoustic principles and techniques in soil and sediment research: The research has established: (1) feasibility of rapid, inexpensive, and non-invasive characterization of soil properties; (2) potential of acoustical techniques in describing the microtopography of agricultural lands; and, (3) usefulness of acoustical techniques in monitoring stream bed form.

Numerical modeling of soil erosion & transport processes to support the Demonstration Erosion Control project: Improvements have been made in the modeling of soil erosion and sediment transport for watersheds and channel systems. A one-dimensional model for routing flow and sediment through natural channels with in-stream structures was upgraded and verified. A two-dimensional model has also been developed for predicting the propagation of unsteady flows along a channel with in-stream structures.

Results demonstrated that when stream corridors needed restoration to be stabilized, degraded channels, water quality, aquatic habitat, and ecosystem health can be improved at little or no extra cost.

Impact of agricultural MSEA on water quality and ecology of MS Delta watersheds and oxbow lakes: Research on CRP lands has established the effectiveness of grass strips in trapping sediments.

Remote sensing and associated technology transfer to production agriculture: Physical and chemical properties of soils were combined with remotely sensed and global positioning system (GPS) data for two fields. Geostatistics was used to establish optimum designs for experiments.

Question. ARS maintains ARS research locations in Mississippi at Stoneville, Starkville, Oxford, and Poplarville, Mississippi. Describe the programs carried out at these locations.

Answer. The programs and their locations are described below: Stoneville, Mississippi—The research programs at Stoneville, Mississippi, are broad in scope and content. They include: the development of soybean genotypes and management systems that are specific to the early season and stress environments of the southern production area, including host resistant germplasm to manage soybean cyst nematodes; improved surveillance and pest control strategies for areawide management of cotton insect pests, and biological and genetic strategies for controlling the insect pests of soybeans, cotton, and pecans; the biochemical genetics of fiber quality, including identification of genetic-physiological parameters that enhance fiber quality,

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and the application of this knowledge to the improvement of cotton varieties; the development and evaluation of sustainable weed management strategies for cotton, soybeans and other crops, including assessment of the ecological and environmental benefits of reduced herbicide use, and the replacement of herbicides and methyl bromide by microbiological agents; the development and implementation of new technologies in cotton ginning that will maintain or enhance fiber quality while saving energy and other costs and improve efficiency; the breeding, genetics, and endocrinology of catfish; and the development of innovative technologies for more efficient pesticide applications in field crops.

Mississippi State (Starkville), Mississippi.—The research programs at Starkville, Mississippi include: the development of integrated pest management strategies with emphasis on boll weevil and other cotton insects, as well as augmentation biocontrol and insect mass-rearing; the development of insect, disease and nematode resistant varieties of corn for the south; the modification and management of forage legume traits that enhance beef and dairy cattle production; the etiology and control of clover diseases caused by fungi, nematodes, and viruses; germplasm conversion and evaluation, and genetic enhancement in cotton, including host plant resistance to insects, diseases, and nematodes; the development of decision support systems for cotton production and cotton pest management; and nutritional and environmental management strategies, including the diagnosis and control of mycoplasmosis, to improve the quality and production efficiency of poultry.

Oxford, Mississippi.—The program at the National Sedimentation Laboratory emphasizes interdisciplinary research on the processes, control, measures, prediction, and evaluation procedures associated with soil erosion by water; transport and deposition of sediment; and movement of agricultural chemicals in watersheds, streams, and lakes. At the National Center for the Development of Natural Products, the ARS Natural Products Research Unit research goals include: discovery of natural products that can safely be used to manage agricultural pests; cultural and genetic alteration of crops and cover crops for self-generation of natural chemicals to manage pests; and development of alternative crops producing high-value natural products such as pharmaceuticals, pesticides, and flavorings.

Poplarville, Mississippi.—Research at Poplarville includes: breeding and cultural evaluation of new and improved small fruits for the Gulf Coast region including cultivars of strawberry, blackberry, highbush blueberries and muscadine grapes; development of new and improved small fruit management practices to increase yields, minimize production losses, improve fruit quality and conserve natural resources; determination of factors that regulate flowering, fruiting, dormancy, yield, cold hardiness, and tolerance to other environmental stresses; determination of optimum planting systems, irrigation and cultural systems adapted to the Gulf States region; and determination of the chemical and physical properties, nutritive value and quality of muscadine pomace and develop methods for utilization of products of pomace by the food industry.

Question. What programs are coordinated with Mississippi State University, the University of Mississippi, and the University of Southern Mississippi?

Answer. Programs that are coordinated with Mississippi State University include GOSSYM-COMAX systems research, boll weevil research, genetic engineering of *Mycoplasma gallinarum*, research on environmental control of poultry houses, kenaf research, weed research, and the Mississippi Delta MSEA project. Programs that are coordinated with the University of Mississippi include acoustic detection of insects in field crops, the Demonstration Erosion Control (DEC) project, the Mississippi Delta MSEA project, and natural products research. Programs coordinated with the University of Southern Mississippi include the Lower Delta Human Nutrition Initiative.

COTTON RESEARCH

Question. Describe by location the pre- and post-harvest cotton research initiatives in ARS.

Answer. Cotton research initiatives (projects) in ARS, by location, are as follows:

Auburn, AL.—Managing wheeled traffic to avoid soil compaction in cotton production systems.

Phoenix, AZ.—Management of the sweetpotato whitefly, including the basic genetics and ecology of the insect; development of economic thresholds for control action; on-farm integrated pest management; reduction of lint stickiness in infested cotton; and host plant resistance to whiteflies. Also, integrated management for suppression of the pink bollworm, crop management for efficient production, and breeding and genetics of extra-long staple (American Pima) cotton.

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Albany, CA.—Cost-effective means of rearing biological control agents for cotton pests.

Fresno, CA.—More efficient ways to manage irrigation of cotton, especially drip irrigation systems; crop management in the irrigated desert.

Shafter, CA.—Integrated systems for managing cotton production in the San Joaquin Valley, including crop production efficiency, pests and diseases, computer modeling of the crop, and improved equipment for production and harvesting.

Fort Collins, CO.—Storage and maintenance of the nation's germplasm collection.

Gainesville, FL.—Ecology, behavior, and biological control of insect pests; modification of insect behavior through manipulation of insect semiochemicals.

Athens, GA.—New means of fiber processing for pulp.

Tifton, GA.—Production systems for the Southeast, emphasizing management of nematodes, weeds, and insect pests with reduced use of nematicides and other pesticides.

New Orleans, LA.—New instrumentation for cotton fiber quality evaluation; new processes for adding value to fiber and to textiles; molecular, biochemical, and ecological analysis of cotton fiber quality factors; and new products from cotton. Also, elimination of formation of aflatoxins in cottonseed; and development of new products and new processes to enhance utilization of cottonseed.

Beltsville, MD (Headquarters).—Area-wide integrated management of insect pests; demonstration trials of biocompetitive strains of *Aspergillus flavus* to reduce aflatoxin contamination of cottonseed.

Mississippi State, MS.—Breeding cotton for resistance to pathogens, nematodes, and insects; integrated management of insect pests; and development and transfer to users of a computer model of the cotton crop production system.

Oxford, MS.—Farming systems that decrease soil erosion and improve water quality in the Mississippi Delta region.

Stoneville, MS.—Breeding for fiber quality and resistance to insect pests; improved crop management with environmentally acceptable production practices; operation of the National Cotton Variety Testing Program; technology for mass rearing of beneficial insects; biological control and other management strategies for insect pests; technology for area-wide control of pests; development of sustainable alternatives to herbicides for weed management in cotton, emphasizing biocontrol; management of herbicide-resistant cotton crops; means to keep herbicides from contaminating waters; development and implementation of new ginning technology; and more efficient and effective technology for application of pesticides to the crop.

Columbia, MO.—More efficient and effective propagation of insects for biocontrol of cotton pests.

Las Cruces, NM.—Gin plant design and operation to retain fiber quality and spinnability of cottons from the West.

Fargo, ND.—Basic genetics, physiology and molecular biology of insect pests.

Wyndmoor, PA.—New value-added industrial products and biodiesel fuel from seed oils and tallow.

Clemson, SC.—Evaluation of cotton spinning performance and end use quality; and instrumentation systems for improved cotton grading.

Florence, SC.—Developing germplasm and soil, crop, and irrigation management practices suitable for Southeastern cotton production systems.

College Station, TX.—Maintenance of the working germplasm collection for cotton; genome mapping for improved cotton breeding; development and testing of area-wide strategies for managing important insect pests of cotton; improved aerial application technology for pesticides; and basic and applied research to control pathogens and nematodes of cotton.

Lubbock, TX.—New principles and new technology for efficient irrigation of cotton and other crops; improving plant productivity under stress conditions (unfavorable environments) in High Plains production systems; and improved harvesting and ginning technologies for stripper-harvested cottons.

Temple, TX.—Sustainable production systems to minimize soil erosion in clay soils.

Weslaco, TX.—Insect pest suppression through area-wide integrated pest management; development of biological control systems; conservation tillage practices for cotton; remote sensing capability for resource assessment; and breeding pest-resistant cottons.

Montpellier, France.—Collection and evaluation of candidate biological control organisms from Eurasia for control of insect pests, weeds, and pathogens.

Question. For your overall cotton research program, provide funding and staffing by project.

Answer. Funding and staffing for the overall cotton research program are as follows:

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Project title	Fiscal year 1997—	
	Funds	Scientists
COTTON		
Soil dynamics, plant growth, and organic waste for sustainable management of degraded soils	\$218,900	0.8
Biology, ecology, sampling and control of whiteflies	1,490,500	5.2
Cotton physiology, genetics, and plant insect interactions	1,277,300	5.0
Integrated pest management strategies for cotton insect control	1,202,900	3.5
Extrusion processing of insect diets for biological control programs	107,900	0.4
Irrigated desert research—II	48,100	.....
Irrigation water and crop management to sustain productivity and protect water quality	91,800	.2
Western integrated cropping systems research	1,154,000	4.0
Preservation of base plant germplasm collection	165,300	.1
Biocontrol through artificial rearing of natural enemies and manipulation of host plant resistance	120,000	.5
Behavioral ecology and management of crop insect pests with semiochemicals	155,200	.3
Insect biological control through behavioral and genetic manipulation	300,300	.9
Chemistry and biochemistry of insect behavior, physiology, and ecology	195,700	.6
European based research on biological control of sweetpotato whitefly	89,400	.4
Microbial treatments to enhance value of agricultural crops and products	34,400	.2
Genetic approaches for managing the corn earworm, <i>helioverpa zea</i> , and the faw <i>spodoptera furgiperda</i>	27,300	.1
Integration of tachinid parasitoids and pathogens to suppress insect pests of corn	55,900	.2
Development of innovative pest control strategies with biological and chemical control agents	116,200	.4
Biology and pathogenicity of <i>noctuidonema guyanense</i> on <i>spodoptera frugiperda</i> and <i>S exigua</i>	76,500	.2
Management of nematodes to reduce crop loss and nematicide use on irrigated crops of the Southeast	38,200	.1
Develop weed management alternatives to methyl bromide for irrigated Southeastern crops	32,500	.1
Molecular analysis of cotton fiber development to improve cotton fiber quality	285,100	1.0
Treatments for delayed cure applications for cotton fabrics	744,300	3.0
Cotton with improved wear and resiliency by facile polymerization reactions	650,200	2.0
Improved durability press cottons via a multifaceted approach	837,400	3.0
Nonwoven textiles from cotton and other natural fibers	586,400	1.1
Develop technology for producing improved and ecologically friendly cotton-rich textiles	714,900	2.7
Correlations between fiber breakage and properties, surface modifications and textile processing quality	856,200	1.9
Biochemical modification of cotton textiles for enhanced performance	735,200	5.5
Variation in structure and performance of cotton from variety, growth history, and processing	1,157,600	5.4
Nature and causes of motes and undeveloped cotton fibers, as related to dyeing imperfections	661,400	4.0
Development of improved instrumentation to measure cotton maturity and fineness	418,800	1.2
Area-wide management of agricultural pests	488,800	.....
Biochemistry and genetics of host plant resistance to insects, diseases, and nematodes	190,000	1.0
Biological control of cotton insects	437,100	1.5
Germplasm enhancement in cotton with the primitive race stocks of <i>gossupium hirsutum</i>	244,200	1.0
Genetic enhancement for resistance to insects and nematodes in cotton	539,200	1.1
Development of model-based decision support systems for cotton production management	822,900	3.0
Integrated computer-based decision aid for cotton pest management	428,800	3.0
Development of integrated control procedures	883,500	3.0
Improved erosion control for upland areas and reduced sediment production in DEC watersheds	101,000	.3
Farming systems for improved water quality/ecology for a Mississippi Delta MSEA	49,100	.1
Development of mass propagation technology for beneficial and pest insects	764,300	1.5
Develop sustainable integrated weed management systems for cotton, soybeans, and other crops	134,100	.3
Ginning methods to enhance fiber quality and value	594,100	2.5
Development and implementation of new technologies in cotton ginning	603,600	2.6
Development of technology for efficient crop production systems	229,400	.8
Develop innovative technology for more efficient pesticide application in field crops	647,200	2.7
Replacement of herbicides and methyl bromide by microbiological control of weeds	137,400	.6
Reduce herbicide contamination of surface water by using alternative management systems cotton production 16,400 .....	.....	.....
Biochemical genetic and ecological effects of natural and synthetic herbicides	137,400	.5

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Project title	Fiscal year 1997—	
	Funds	Scientists
Soil quality of sustainable agricultural systems and impacts on herbicide and alternative weed management systems	256,300	1.0
Genetic-physiological parameters that enhance fiber quality	495,800	1.6
Biological and genetic control of crop pests emphasizing heliothis	417,100	0.9
Areawide management of cotton insect pests in midsouth development of improved surveillance and pest management technology	678,400	3.0
Control strategies for heliothis/helicoverpa spp. and other field crop insects in cotton agroecosystem	1,025,900	3.0
Biochemical genetics of fiber quality and its application to the improvement of cotton varieties	132,400	1.0
Development of high yield, high quality, and environmentally acceptable cotton production systems	459,100	2.1
National Cotton Variety Test Program	458,900	.2
Developmental and genetic factors useful to the propagation of beneficial insects for biocontrol	242,200	.8
Development of ginning systems and knowledge to enhance value and textile utility of Western cottons	962,000	2.7
Biochemical and molecular approaches to the development of artificial rearing diets and DNA probe	494,100	1.5
Genes controlling insects development and reproduction and methods for insect genetic transformation	462,800	.7
Cotton quality identification and measurements affecting processing performance and end use quality	2,179,500	6.0
Management systems that enhance soil productivity in the Southeastern coastal plain	99,600	.4
Cotton germplasm enhancement and production systems with higher lint yield and improved fiber quality	377,300	1.5
Development of area-wide management strategies for adult corn earworm and other crop insect pests	266,300	1.1
Aerial application technology for crop protection	432,400	1.7
Acquisition, evaluation, maintenance and systemization of cotton germplasm	412,700	1.2
Cotton germplasm evaluation and genome mapping	389,900	.8
Identify and develop alternative strategies for control of nematode parasites on cotton and kenaf	339,600	1.2
Develop nonchemical strategies for control of cotton diseases	979,300	3.7
Improving plant performance in adverse environment	369,600	.8
Development of cotton germplasm with improved tolerance to abiotic stresses	150,700	.6
Characterizing plant responses to thermal stress and their metabolic and molecular basis	264,300	.9
Harvesting and ginning technologies for stripper cotton	674,300	3.5
Managing stress for improved water use efficiency and semi-arid crop production	130,300	.6
Cotton root systems: genetic diversity and response to environmental stress	190,600	1.0
Sustainable agricultural production systems for clay soils	62,800	.3
Mass propagation/augmentation of wasp parasites to manage weevils, caterpillars, and other pests	715,200	.9
Biology and ecology of crop pests emphasizing area-wide suppression of boll weevil and corn earworm	568,400	1.6
Spatial information technology and computer-aided decision support systems for field management	61,400	.1
Integrated production systems	145,400	.4
Total	36,988,900	123.1
COTTONSEED		
Development of processes to improve oilseed utilization	765,100	3.0
Development of biologically active peptides as pesticides	65,600	.2
Aflatoxin control through targeting gene cluster governing aflatoxin synthesis in corn and cottonseed	519,200	2.1
Modification of fungal community structure to improve food safety	397,900	1.6
The conversion and utilization of agricultural byproducts as adsorbent material	103,700	.3
Aflatoxin control through addition of enhancement of antifungal genes in corn and cotton	674,100	3.4
Preharvest control of aflatoxin	219,200	.....
Development of ginning systems and knowledge to enhance value and textile utility of western cottons	106,900	0.3
Conversion of natural glycerides to higher valued products	214,100	.8

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Project title	Fiscal year 1997—	
	Funds	Scientists
Harvest and ginning technologies for stripper cotton	92,000	.5
Total	3,157,800	12.2
Total for cotton and cotton seed	40,146,700	135.3

Question. What recent accomplishments have come from the research?

Answer. A few recent accomplishments of ARS cotton research are as follows:

New cottons from India available to broaden the genetic base of cotton.—An ARS geneticist from Florence, SC, in cooperation with other scientists, analyzed the pedigrees of modern cotton varieties to prove that the genetic base of modern cotton varieties is narrowing. The “sameness” of varieties that are supposedly genetically distinct increases their vulnerability to a disastrous disease epidemic. Another ARS geneticist from College Station, TX, has recently collected more than 1100 cotton accessions from India, which will be added to the national germplasm collection and made available to breeders. These Indian cottons will help to broaden the genetic base of American cotton varieties.

Cotton seedling diseases suppressed.—ARS scientists in College Station, TX, identified a fungus that can be applied to cotton planting seed as a biological control agent for seedling diseases. In tests across the Cotton Belt, the combination of the biological control agent and a fungicide was superior to fungicides alone in controlling seedling diseases. The biological control agent is being commercialized by the private sector.

Nectariless cotton resists tarnished plant bug damage.—ARS genetics research in Stoneville, MS, produced a *nectariless* cotton variety (lacking a gland called the “nectary”). These plants sustain about 50 percent less damage from tarnished plant bugs than do normal plants. Seed companies are now breeding the nectariless trait into *Bt* cotton because of it reduces the need for insecticides to control pests unaffected by the *Bt*.

Artificial diet for rearing predatory green lacewing larvae.—These larvae are voracious predators of whiteflies, aphids, and many other crop pests, but until now they had to be reared on insect eggs that cost more than \$600 per kg. On the new artificial diet, developed by ARS in Phoenix, AZ, they can be reared for 1/100 the cost, which will open the market for their use as biological control agents in cotton crops in the field. A patent is pending for the diet.

“Moisture-seeking” cottonseed planter developed.—ARS in Shafter, CA, has developed and patented a planter that places the seed in soil with constant moisture, despite variation in soil texture or moisture distribution. The planter is expected to eliminate the need for replanting on virtually all cotton acreage in the West, for a savings of \$10 million per year.

Boll weevil management system for South Texas.—ARS in Weslaco, TX, demonstrated that *Catolaccus grandis*, a wasp parasite of the boll weevil, killed 96 to 99.6 percent of boll weevils in the field. Wasps reared on an artificial diet were effective. The total cost of using *Catolaccus grandis*, including rearing and release, is less than \$23 per acre per year. A boll weevil management system has been proposed that reduces insecticide runoff from the field by 2/3, increases profitability, and creates a new industry (propagation of natural enemies of the boll weevil).

Core-wrapped yarns.—ARS research in New Orleans, LA, has led to development of new spinning technology for producing a unique core-wrap yarn. The yarn consists of a strong synthetic core fiber with a sheath of pure cotton fibers. The core and sheath do not slip or separate during use. The synthetic core provides high strength, durable press, and other valuable properties, while the sheath provides the comfort of pure cotton. The patented spinning process has been licensed to a U.S. company for commercial use.

SCREWWORM RESEARCH

Question. What objectives are currently underway on screwworm research?

Answer. There are seven objectives underway on screwworm research. All of these objectives are aimed at supporting the APHIS screwworm eradication program in Central America and FAO screwworm efforts in the Caribbean region. The ultimate objective is to free Central America and the Caribbean from screwworm so that we can either eliminate or minimize the possibility of reintroduction of screwworm into the U.S. The seven objectives of ARS screwworm research are to develop:

—a vigorous screwworm strain for mass production of sterile flies;

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- new methods and validate the existing methods for surveillance, trapping, and monitoring of screwworm in Central America and the Caribbean region;
- an easy to use, color-based Elisa method to distinguish the primary from the secondary screwworm under field conditions;
- genetic fingerprints of feral screwworm populations of Central America and the Caribbean region so that we can trace the source of screwworm reinfestation in eradicated areas;
- improved methods for the study of ecology, biology and population dynamics of screwworm populations in their natural habitats. This includes study of behavior, specially the habitat preferences, and dispersal of sterile and native flies using remote sensing and Geographic Information System technologies;
- economical substitutes for the larval diet and cost effective screwworm rearing technologies. This includes development of male-only strain; and
- cryopreservation methods for long-term storage of screwworm eggs to reduce the cost of continual screwworm rearing during the period of low demand for sterile flies and to increase the production of screwworm on short notice in response to high-demand and emergency periods.

Question. At what locations is the research conducted?

Answer. ARS conducts its screwworm research at four locations. These include Beltsville, Maryland; Lincoln, Nebraska; Fargo, North Dakota; and Panama City, Panama.

Question. Provide resources associated with this research by location.

Answer. The funding associated with screwworm research in fiscal year 1997 is as follows:

<i>Location</i>	<i>Fiscal year 1997 funds</i>
Beltsville, MD	\$60,600
Lincoln, NE	612,400
Fargo, ND	78,400
Panama City, Panama	998,000
Total	1,749,400

Question. What work is carried out cooperatively with APHIS?

Answer. ARS conducts six research projects in cooperation with APHIS. These include:

- development and testing of new vigorous screwworm strains for mass production of sterile flies;
- development of economical substitutes for the larval diet and cost effective screwworm rearing technologies. This also includes development of a male-only strain;
- diagnosis and correction of problems that occur in mass production of screwworm; such as breeding of house fly populations in the mass rearing facility or decline in screwworm pupal weights;
- field testing of new screwworm trapping technologies developed by ARS. This includes the use of remote sensing methods;
- diagnosis of factors contributing to the lingering screwworm infestations in areas under eradication; and
- collection of feral screwworm samples from areas targeted for eradication for genetic fingerprinting.

FOOT-AND-MOUTH RESEARCH

Question. Describe your research on Foot-and-Mouth Disease (FMD).

Answer. All ARS research on FMD is conducted at the Plum Island Animal Disease Center (PIADC), Greenport, New York. The first goal of the FMD program is to continue development of genetically engineered or altered FMD virus that can be used to make vaccines that in the future would allow production and safe use outside of biocontainment. A second goal is development of diagnostics that can be produced and used outside of biocontainment and which can detect and differentiate vaccinated from infected animals. No such diagnostics currently exist. A third goal is to understand the basic cellular immune response of infected cattle in order to optimize vaccines, diagnostics, and alternative control measures. A fourth goal is to examine why some animals recover from infection but continue to shed virus.

Question. Provide funding and staffing for fiscal years 1997 and 1998.

Answer. In fiscal year 1997, funding of \$5,167,900 including 3.9 SY's was allocated to Plum Island Animal Disease Center. The same amount of resources is proposed in the fiscal year 1998 Budget.

Question. How do we cooperate with foreign countries in FMD research?

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Answer. The ARS FMD program continues to maintain a number of international research collaborations on a formal and informal basis throughout the world. These include cooperative agreements, training programs, and participation in international meetings and on international committees. PIADC's Foreign Animal Disease Laboratory holds the North American FMD vaccine bank for Canada, U.S., and Mexico. Scientists meet at least once a year to update emergency preparedness plans to make use of this resource in an emergency. Examples of recent new international collaborations are a proposed Brazil/U.S. project and a proposed Egypt/Israel/U.S. project. These types of programs allow international researchers to participate in the development and testing of new FMD diagnostics and vaccines. Concurrently, such cooperative programs provide PIADC scientists access to field environments to test new vaccines and diagnostics that have already been tested in the laboratory. This permits ARS to validate a new generation of genetically-engineered vaccines since USDA can not test FMD vaccines in the U.S. PIADC provides reagents and ideas and shares authorship on publications with many international groups. Participation in international workshops recently allowed PIADC to share information on their molecular expression system used to develop a new generation of vaccines, and it has resulted in several new collaborations. This technology is believed to be superior to that used by many European institutes.

Question. Describe recent outbreaks of FMD and responses to control or eradicate them.

Answer. The March 1997 outbreak of FMD in Taiwan is one of the most dramatic examples of how a livestock industry in a country can be totally destroyed in less than 1 month's time. FMD is highly contagious and spreads through herds at an alarming rate. More than 700,000 of Taiwan's 11 million pigs have died of the disease, and 3.6 million more are being slaughtered. This has resulted in environmental concerns about how to dispose of the dead swine. This outbreak closed all markets for Taiwan except those that already have FMD, and Japan has lost an important trading partner. This crisis will or is expected to increase total U.S. exports by \$.5 billion. Taiwan will have to completely restock their swine industry with new animals and they are predicted to need a vaccination program for at least 10 years. The loss of FMD-free status will completely preclude their export of fresh pork products. With the number of international travelers entering the U.S. each day and the fact that FMD virus remains viable in pork and beef products for long periods of time, the U.S. is constantly concerned about accidental or terrorist introduction of FMD into the U.S. livestock population. Environmental concerns associated with the destruction of large numbers of animals during an FMD eradication program also contribute to the vulnerability of the U.S. livestock industry.

RESEARCH ON NARCOTICS

Question. Describe ARS's Program in research on drugs and narcotics.

Answer. The Agricultural Research Service (ARS) narcotics research program supports the overall narcotic control programs of federal law enforcement, foreign affairs, and intelligence agencies.

ARS currently maintains research programs for the eradication of narcotic crops using chemical and biological means, the identification of illicit crops using remote sensing, the estimation of narcotic crop yields, narcotic plant chemistry, and environmentally sound agricultural alternatives to illicit cultivation in narcotics producing countries.

Question. Provide funding and staff years for fiscal years 1996–1998.

Answer. The funding and staffing for ARS narcotics research programs are as follows:

Location	Fiscal year 1996—		Fiscal year 1997—		Fiscal year 1998—	
	Funds	Scientists	Funds	Scientists	Funds	Scientists
Beltsville, MD	\$2,677,800	9.1	\$3,053,200	9.4	\$3,051,300	9.4
Weslaco, TX	277,800	1.0	.....	.....	.....	.....
Headquarters	1,756,400	.....	1,658,800	.....	1,657,700	.....
Total	4,712,000	10.1	4,712,000	9.4	4,709,000	9.4

Question. List recent accomplishments and benefits from this research.

Answer. During the last year, ARS supported herbicidal, eradication programs in Colombia and Panama, implemented by the U.S. Department of State. ARS also supported opium crop estimation efforts in Burma, India, and Laos, an opium evaluation program in Turkey, and implemented cooperative alternative crop research

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programs with counterpart institutions in Mexico, Peru, and the United Nations Drug Control Program. In support of these overseas efforts, an additional \$250,000 was received from the intelligence community, \$50,000 from the Department of State for crop eradication, an additional \$265,000 earmarked from Department of State for the Turkish opium program, and \$100,000 from the U.S. Embassy, Lima, for alternative crop development.

ARS is currently in the process of preparing peer reviewed journal articles relevant to both bioherbicides for narcotic crop control, and integrated pest management for alternative crop initiatives in the tropics.

SOYBEAN RESEARCH

Question. What areas of soybean research are you pursuing?

Answer. ARS conducts soybean research at 28 locations in Federal research laboratories and on university campuses. The program is a nationally managed, fully coordinated, multidisciplinary approach to solving production and postharvest needs of soybeans. The locations with objectives for the research follows:

Albany, CA.—Genetic modification of soybean oil for industrial use.

Ames, IA.—Genetic research for soybean improvement.

Beltsville, MD.—Develop improved varieties with desired genetic traits such as resistance to pathogens and insects, and suppression of weeds, and develop management/crop models.

Brookings, SD.—Integrated crop management systems.

Columbus, OH.—Production optimization, water quality, and flooding tolerance.

Columbia, MO.—Cropping systems and water management strategies.

Coshocton, OH.—Management practices for erosion control and water quality.

Florence, SC.—Development of cropping systems to optimize water management.

Fort Collins, CO.—Acquisition, maintenance, and preservation of germplasm.

Frederick, MD.—Molecular characterization of soybean dwarf virus.

Gainesville, FL.—Environmental, physiological, and genetic limitations to production.

Ithaca, NY.—Genetic enhancement of root development.

Lincoln, NE.—Management practices to maximize production efficiency.

Madison, WI.—Minimize harmful effects of bacterial pathogens.

Manhattan, KS.—Grain odor assessment technology.

Mayaguez, PR.—Winter nursery facilities to accelerate improved variety development.

Morris, MN.—Environmental and crop management limitations to production.

New Orleans, LA.—Biomodification of soybean oil for value-added products.

Oxford, MS.—Develop sustainable cropping systems.

Peoria, IL.—Product development, conversion of oil and protein for food and new industrial uses.

Raleigh, NC.—Eliminate genetic and physiological limitations to production and enhance nitrogen fixation.

St. Paul, MN.—Management and cropping practices affecting water quality.

Stoneville, MS.—Develop insect resistant germplasm and improve weed control techniques, and host resistance to soybean cyst nematodes.

Tifton, GA.—Develop pesticide technology for control of nematodes, weeds, and insects.

Urbana, IL.—Develop comprehensive soybean production technologies and maintain, evaluate, and distribute germplasm.

West Lafayette, IN.—Management practices for weed and disease control, and develop improved germplasm.

Wooster, OH.—Management practices for pest control and to develop germplasm for divergent environments.

Wyndmoor, PA.—Develop oil products for industrial use.

Question. List research funding and staff years by location.

Answer. Current funding and scientific years for each location follows:

Location	1997 funding	Scientists
Albany, CA	\$559,300	2.5
Ames, IA	803,300	2.2
Beltsville, MD	4,514,600	15.3
Brookings, SD	148,600	1.0
Columbus, OH	99,200	0.4
Columbia, MO	267,700	.8

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Location	1997 funding	Scientists
Coshocton, OH	69,400	.3
Florence, SC	198,400	.8
Ft. Collins, CO	279,100	.5
Frederick, MD	83,900	.1
Gainesville, FL	52,900	.....
Ithaca, NY	22,100	.6
Lincoln, NE	63,900	.2
Madison, WI	21,200	.1
Manhattan, KS	128,200	.6
Mayaguez, PR	120,200	.1
Morris, MN	249,700	1.3
New Orleans, LA	1,063,100	4.0
Oxford, MS	101,000	.3
Peoria, IL	5,643,200	18.0
Raleigh, NC	1,022,600	6.0
St. Paul, MN	307,500	.9
Stoneville, MS	3,515,500	12.0
Tifton, GA	64,000	.4
Urbana, IL	2,117,800	11.1
W. Lafayette, IN	793,900	3.0
Wooster, OH	297,500	1.4
Wyndmoor, PA	741,300	2.7
Total	23,349,100	86.6

Question. List recent accomplishments obtained in your research on soybeans.

Answer. ARS focuses its soybean research on developing new uses for soybeans and on increasing soybean production efficiency so that production costs are lowered and soybeans are more competitive in the global market. Several ink formulations have been developed by scientists at Peoria, Illinois. This work resulted in a patent being issued for newspaper printing ink and a pending patent for heat-set and sheet-fed printing inks. Market potential use of soy or vegetable oil in ink formations is estimated at one billion pounds or eight percent of domestic soybean oil production and would represent a 300 percent increase in current industrial use of soybean oil. Modified soybean oil continues to be evaluated as an alternative for diesel fuel by developing cost-effective technology for conversion to fatty acid esters and commercial testing of performance enhancing additives. Work is progressing on use of soy foamed plywood glues. Soybeans could be used as a foaming agent for softwood plywood adhesives and replace blood protein at a lower cost. Work is also continuing to develop soybean-derived lubricants that are biodegradable and friendly when lost to the environment such as when used on chainsaws.

Significant advancement has been made toward broadening the genetic base of soybeans by obtaining hundreds of soybean lines from China and adding these to the soybean collection maintained at Urbana, Illinois. The soybean plant originated in China and adding new lines brings new genes for pest resistance and for developing new value-added products. The nation's commercial soybean varieties are descended from a small number of ancestral lines. Thirty-five lines account for more than 95 percent of the genes in all commercial varieties grown in the United States. Soybean lines also have been developed that are expected to have longer shelf-lives without developing rancidity, and other lines have less capability of developing off-flavors. The projected cost savings for processors is about \$200 million per year. A new variety, jointly released with the University of Illinois, lacks an enzyme inhibitor that interferes with protein digestion by people and animals, thus making the meal a higher quality and more nutritious feed. This will considerably increase the feeding efficiency of animals fed soy meal. Progress continues in identifying new lines with resistance to nematode infections and other disease organisms. Drought-resistant germplasm is nearing the stage of public release, and lines have been identified that will contribute flooding tolerance genes to soybeans. A new soyfood variety, "Pearl," has been released and provides a new high-value product for export to Japan. Another variety recently released demonstrates it is possible to achieve simultaneous increase in protein, oil, and yield. The high protein variety "Prolina" should deliver high protein meal for the poultry and swine feed industries.

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HUMAN NUTRITION

Question. ARS now has six human nutrition centers. Please explain the mission of each.

Answer. The mission of each of the six human nutrition centers follows:

Beltsville Human Nutrition Research Center, Beltsville, Maryland.—Defines the role of food and its components in optimizing health and reducing the risk of nutritionally related disorders in the diverse American population. To accomplish this mission, the Center develops new methods of food analysis; determines the role of nutrients and their interactions in maintaining health; monitors nutritional intakes and maintains the database of the nutrient content of foods; studies the expenditure of energy by using direct and indirect calorimetry; and investigates the consequences of altered nutrient intakes in free-living humans.

Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University, Boston, Massachusetts.—Defines safe and adequate nutrient intakes and identifies factors that may contribute to degenerative processes associated with aging. To accomplish this mission, the Center determines factors related to prevention of age-related loss of bone density leading to osteoporosis and fracture, and the preservation of muscle strength; identifies dietary factors critical in slowing or preventing cataract development; determines the relation of antioxidant food components to heart disease and immune function; and explores relationships between vitamins and brain function, stroke, and dementia.

Grand Forks Human Nutrition Research Center, Grand Forks, North Dakota.—Determines nutrient needs for humans with an emphasis on mineral element requirements that prevent disease and promote health and optimal function throughout life. To accomplish this mission, the Center determines the importance of mineral elements at the molecular level with an emphasis on chronic disease; identifies detrimental functional changes, especially in bone, brain, cardiovascular and reproductive systems, that occur in the U.S. population because of improper mineral element nutrition; identifies and validates biochemical and physiological status assessment indicators for use in the study of populations at risk from inadequate mineral element nutrition; and defines the impact of environmental, dietary, physiological and psychological stressors on specific mineral requirements.

Children's Nutrition Research Center at Baylor College of Medicine, Houston, Texas.—Defines the nutritional needs of pregnant and lactating women and of their infants and children from conception through adolescence. To accomplish this mission, the Center establishes nutrient requirements to prevent low birth weight babies, particularly in pregnant adolescents; elucidates nutrient-gene interactions that regulate metabolism and disposition of nutrients; determines nutrient requirements for growth and development of school-aged and adolescent children; and establishes nutritional relationships to acute and chronic childhood diseases.

Western Human Nutrition Research Center, San Francisco, California.—Determines the impacts of dietary, environmental, behavioral, and genetic factors on nutrient requirements and functions. To accomplish this mission, the Center establishes markers of nutritional status in relation to maintenance of healthy body weight, nutrition, infection and immune disorders; and protective factors in foods.

Arkansas Children's Nutrition Research Center, Little Rock, Arkansas.—Determines the role of nutrition in cognitive and behavioral function, and the health consequences of infant consumption of dietary factors (phytochemicals) such as phytoestrogens on endocrine and metabolic development and prevention of chronic diseases.

Question. Provide existing resources, both funding and staff years, for each center. Provide the resources planned for each.

Answer. The funding and scientific staffing for the ARS Human Nutrition Research Centers and other related programs for fiscal year 1997 and fiscal year 1998 are as follows:

Centers and other related programs	Fiscal year 1997		Fiscal year 1998 funding
	Funding	Staffing	
Beltsville Human Nutrition Research Center, Beltsville, MD	\$18,499,900	43	\$19,499,900
Grand Forks Human Nutrition Research Center, Grand Forks, ND	7,999,700	12	8,999,700
Human Nutrition Research Center on Aging at Tufts	14,747,900	42	15,747,900
University, Boston, MA (Includes Geriatric Nutrition Research, Danville, PA) ...	(188,000)	.....	(188,000)
Children's Nutrition Research Center at Baylor College of Medicine, Houston, TX	10,756,600	26	11,756,600
Western Human Nutrition Research Center, San Francisco, CA	5,317,600	12	6,317,600
Arkansas Children' Nutrition Research Center, Little Rock, Arkansas	1,878,800	5	2,878,800

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Centers and other related programs	Fiscal year 1997		Fiscal year 1998 funding
	Funding	Staffing	
Lower Mississippi Delta Intervention Research Initiative (LA, AR, MS)	3,166,900	16	3,166,900
National Agricultural Library	693,400	7	693,400
Headquarters			6,000,000
Other Locations	1,075,600	5	1,089,600
Totals	64,136,400	168	76,150,400

Of the total staff of 168, 85 are Federal FTE and 83 are cooperator employees.

Question. There appears to be significant overlap in the research carried out at the nutrition centers. Can the resources of these centers be combined? Explain.

Answer. Each of the described missions of the USDA/ARS Human Nutrition Research Centers are distinct and unique. It would be difficult, if not impossible, to combine resources at these Centers because of the different populations and nutrients studied and approaches used at each that require specific types of skills, equipment, and facilities. To best use their limited resources, the six USDA/ARS Human Nutrition Research Center Directors meet regularly with the National Program Staff for Human Nutrition Research in ARS to assure that there is no overlap in research programs and that critical and high impact research is carried out at the Center with the appropriate staff, equipment and facilities. A specific research problem such as the cause of a certain nutritional disorder, or the assessment or alleviation of a nutritional problem, may require study at more than one Center because of the specific resources and expertise available in each.

Question. How do you integrate human nutrition research with the agricultural mission of your agency?

Answer. Knowledge about health-promoting foods and components of foods is used by animal, plant, soil, and post-harvest scientists for development of methods that modify food composition both during production and processing, expand food choices, and provide more options for healthful diets. Examples of nutritional input to the agriculture include:

- Production of meat with less fat.
- Development of grains with more healthful fatty acid profiles and with increased content of health promoting vitamins and minerals.
- Development of fruits and vegetables with increased content of beneficial phytochemicals such as vitamin C and carotene—a precursor of vitamin A.
- Identification of components of a healthful diet high in phytonutrients and antioxidant substances.

Nutrition research results can counteract some of the claimed negative attributes for some nutritious foods such as meat, milk, and eggs which have affected the market for these products.

REMOTE SENSING

Question. What remote sensing research are you pursuing?

Answer. ARS research on the development of remote sensing technologies that can benefit agricultural production, resource management, and the environment is conducted at the following locations: Phoenix, Arizona; Tucson, Arizona; Shafter, California; Fort Collins, Colorado; Beltsville, Maryland; El Reno, Oklahoma; University Park, Pennsylvania; and Weslaco, Texas.

Phoenix, Arizona.—Research is focused on four main areas: development of satellite-based remote sensing for assessing large-area evapotranspiration rates over croplands and rangelands to assess plant vigor, soil moisture conditions, and biomass production; development of decision support tools for farm managers using both on-site measurements of physical and biological conditions, and geospatial information provided by sensors mounted on farm equipment and aircraft; use of hand-held radiometers for non-destructive estimation of light and water use efficiencies by agricultural crops and native plant communities; and improvement of basic sensor design, use, and image quality.

Tucson, Arizona.—Research is targeted toward the scientific and inventory needs of the SALSA (Semi-Arid Land-Surface Atmosphere) project. The primary goal of this multi-year, multi-disciplinary project, involving several agencies and research institutions, is to understand, model, and predict the consequences of natural and human-induced changes on the basin-wide water balance and ecological diversity of semi-arid regions at storm event, seasonal, interannual, and decadal time-scales using the San Pedro River Basin. Remotely sensed data will be used to determine the rates of evapotranspiration from key landscape features, such as riparian cor-

ridors, and to quantify long-term changes in vegetation for both the U.S. and Mexican components of this river basin.

Shafter, California.—Remote sensing activities are directed toward the development and validation of precision farming practices which would provide economic benefits to California cotton growers and the industry, and environmental benefits to rural communities. Detailed ground-based radiometer measurements are being used to develop spectral signatures for detecting insects, mites, nematodes, and diseases with the aid of high-resolution imagery. An aircraft-based, multi-spectral remote sensing system is being developed for scouting early stages of pest infestations in cotton fields. Procedures for incorporating this remotely-sensed information into ARS cotton production models will extend their crop and farm management capabilities.

Fort Collins, Colorado.—Research is aimed at assessing the potential for using readily available soil survey information and passive microwave reflectance imagery to map the subsurface hydraulic properties of agricultural soils. The methodology will be validated using data from the intensively instrumented ARS watershed on the Little Washita River in central Oklahoma. The productivity, economic, and environmental benefits of incorporating remotely sensed data in farm-level decision support models are also being evaluated using data from two farms in eastern Colorado.

Beltsville, Maryland.—The Remote Sensing and Modeling Laboratory is evaluating the potential for using actively induced fluorescence to determine vegetation condition, retrieve important biophysical parameters, and estimate large-area crop yields. Laser induced fluorescence techniques are being used to determine changes in leaf photosynthesis, and measure water and nutrient stresses. Remotely sensed biophysical parameters, such as leaf area index, are being used with process-based crop models to assess changes in crop condition and predict crop yields at regional scales. Research on the use of spectral imagery from satellite-based sensors for improving reliability and performance in precision farming is also being pursued.

The Hydrology Laboratory at Beltsville, Maryland is conducting research on remote sensing applications to water resources management and agriculture. Techniques are being developed to use existing and future satellite-based sensors, with wavelengths in the visible to microwave bands, for mapping water, energy, and biogeochemical fluxes over large areas. These techniques will provide resource management agencies with practical and cost-effective methods for monitoring environmental conditions. Techniques for measuring the water equivalent of snow cover are being developed and tested in several western U.S. basins. ARS is collaborating with the National Aeronautics and Space Administration in the development of practical technologies for mapping surface soil moisture over large areas using microwave imagery to improve both hydrologic and climate forecasts, and agricultural management decisions. Airborne laser altimeter data is being used to measure topography, gully and stream cross-sections, vegetative cover, and other landscape features for large areas. These measurements have the potential to improve estimates of soil losses from agricultural landscapes and promote more effective management of the nation's water resources.

El Reno, Oklahoma.—Remote sensing research is directed toward using digital elevation data and imagery from satellite-and aircraft-based sensors to characterize diverse agricultural landscapes at watershed and river basin scales. Hydrologic and geomorphic analyses of vital landscape features, such as topography, channel networks, subdrainage boundaries, and flow paths are being extracted from the digital elevation data. Spatial distributions of suspended sediment and chlorophyll contaminants in surface water bodies are being estimated from low-level, hyperspectral sensor platforms. Soil moisture and biophysical properties of vegetation, such as leaf area index, are being mapped using remotely sensed data from aircraft-based sensors. Future research will include the use of aircraft-and satellite-based sensors to provide estimates of forage quantity and quality over large areas.

University Park, Pennsylvania.—Remote sensing research is directed toward using aircraft-and satellite-based sensors to evaluate spatial and temporal changes in surface soil moisture over northeastern landscapes. This information will be used to establish the reliability and performance of soil water balance, and natural resource management models that incorporate both the temporal and spatial variability of the hydraulic properties of soils in agricultural landscapes. The National Aeronautics and Space Administration and Pennsylvania State University are collaborating in the work.

Weslaco, Texas.—Remote sensing research includes: development of near real-time sensors to identify, quantify, and analyze biological and soil variables; data integration from remote sensing, geographic information systems, and global positioning systems into technologies for agricultural and resource management; methodologies for using sensor imagery in developing site-specific strategies for crop and pasture

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land management; and the transfer of spatial information systems and technologies to public agencies and the private sector. This work is collaborative with several academic institutions, State and Federal agencies, and private companies. For example, ARS researchers, the Animal Plant Health Inspection Service, farmers, and crop insurance representatives are cooperating in the development of spatial management systems for monitoring and responding to the impact of Mexican fruit flies on citrus production in Texas. In April 1997, the location hosted the 16th Biennial Workshop on Color Photography and Videography with participants from several companies and 16 foreign and domestic research institutions.

Question. Please list funding and staff years by location.

Answer. Funding and scientists by location for fiscal year 1997 are as follows:

Location	Funding	Scientists
Phoenix, AZ	\$327,300	1.2
Tucson, AZ	88,600	0.3
Shafter, CA	115,400	.4
Ft. Collins, CO	26,100	.1
Beltsville, MD	2,236,500	8.4
El Reno, OK	599,600	2.0
University Park, PA	38,400	.1
Weslaco, TX	1,042,700	1.8
Total	4,474,600	14.3

Question. What is your justification for proposing the elimination of the "Remote Sensing Technologies for Crop Production" project?

Answer. This Cooperative Research Project, which was established by Congressional Directive in 1989, was targeted toward stimulating private sector interest in agricultural applications of imagery from satellite-and aircraft-based sensors, and expanding the use of ARS developments of Remote Sensing Research by resource managers and food and fiber producers. In recent years, there has been substantial growth in the private sector's interest in applying remote sensing technologies to both resource management and food and fiber production therefore reducing the need for this project. Because of pressures on the ARS budget, several current activities, including this project, must be terminated to support new budget initiatives. Every effort will be made to insure that the desired inter-action between ARS remote sensing specialists, public sector resource management agencies, and industry will continue to be promoted through other remote sensing initiatives.

HAZARDOUS WASTE CLEAN-UP (HWC)

Question. Please list the funds obligated by location for hazardous wastes projects for fiscal year 1996 and planned for fiscal year 1997.

Answer. The funds obligated by location for hazardous waste projects for fiscal year 1996 and planned for fiscal year 1997 are as follows:

Fiscal year 1996 funded projects

Athens, GA	\$7,500
Savannah, GA	375,000
Ames, IA	243,863
Peoria, IL	63,100
Beltsville, MD	2,662,103
Greenport, NY	524,569
El Reno, OK	70,000
Mayaguez, PR	12,000
Weslaco, TX	35,775
St. Croix, VI	48,890
Madison, WI	37,200
Total	4,080,000

Fiscal year 1997 planned projects

Shafter, CA	\$50,000
Washington, DC	100,000
Savannah, GA	100,000
Ames, IA	20,000

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Peoria, IL	50,000
West Lafayette, IN	50,000
Beltsville, MD	2,658,000
East Lansing, MI	116,000
Greenport, NY	1,030,000
Coshocton, OH	150,000
Weslaco, TX	15,000
Temple, TX	36,000
Madison, WI	25,000

Total 4,400,000

Question. Provide amounts and brief description of each project funded from both Agency funds and departmental HWC funds.

Answer. The amounts and a brief description of each project funded from both Agency funds and departmental HWC funds for fiscal year 1996 and planned for fiscal year 1997 are as follows:

Fiscal year 1996 Agency Funded Projects:

Athens, GA: Underground Storage Tank Removal/Replacement	\$7,500
Beltsville, MD:	
Remedial Investigation/ Feasibility Study at National Priorities	
List Sites	1,400,191
Removal Actions at National Priorities List Sites	436,850
Greenport, NY:	
RCRA Site Closure Activities	360,017
Petroleum Contamination Cleanup	164,552
El Reno, OK: Environmental Site Assessment Phase II/Sampling	70,000
Mayaguez, PR: Underground Storage Tank Removal/Replacement	12,000
St. Croix, VI: Underground Storage Tanks Removals/Replacements ..	48,890
Subtotal	2,500,000

Fiscal year 1996 HWC Funded Projects:

Savannah, GA: RCRA Sampling and Remedial Actions	375,000
Beltsville, MD:	
Biodegradable Site Cleanup	574,606
Remedial Investigation/ Feasibility Study at National Priorities	
List Sites	14,837
Underground Storage Tanks Removals/Replacements	235,619
Ames, IA: Underground Storage Tanks Removals/Replacements	243,863
Peoria, IL: Sampling and Remedial Actions	63,100
Weslaco, TX:	
Investigate Acid Neutralization Tank	7,225
Investigate Tractor Rinse Station	16,025
Upgrade Pesticide Rinsewater Underground Storage Tank	12,525
Madison, WI: Underground Storage Tanks Removals/Replacements ..	37,200
Subtotal	1,580,000
Total	4,080,000

Fiscal year 1997 Agency Planned Projects

In fiscal year 1997, it is anticipated that all critical hazardous waste cleanup requirements will be funded via the departmental HWC central account.

Fiscal year 1997 HWC Planned Projects:

Shafter, CA: Drywell Remediation	\$50,000
Washington, DC: Legal Support, Office of General Counsel	100,000
Savannah, GA: RCRA Sampling and Remedial Actions	100,000
Ames, IA: Underground Storage Tanks/Remedial Actions	20,000
Peoria, IL: Sampling and Remedial Actions	50,000
West Lafayette, IN: Underground Storage Tanks Removals/Replacements	50,000
Beltsville, MD:	
Remedial Investigation/Feasibility Study at National Priorities	
List Sites	1,408,000
Removal Actions at National Priorities List Sites	1,000,000
Underground Storage Tanks Removals/Replacements	250,000

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East Lansing, MI:	
Site Investigation/Additional Sampling	50,000
Underground Storage Tank Removal/Replacement	66,000
Greenport, NY:	
RCRA Site Closure Activities	600,000
Removal Actions at Various Sites	400,000
Underground Storage Tank Removal/Replacement	30,000
Coshocton, OH: Underground Storage Tanks Removals/Replacements	150,000
Weslaco, TX: Underground Storage Tank/Remedial Actions	15,000
Temple, TX: Site Assessment and Remedial Actions	36,000
Madison, WI: Underground Storage Tanks/Remedial Actions	25,000
Total	4,400,000

Question. Please provide a listing of ARS locations where environmental clean-up activities are planned in fiscal years 1997 and 1998.

Answer. A listing of ARS locations where environmental clean-up activities are planned in fiscal years 1997 and 1998 is provided below:

Shafter, CA	Coshocton, OH
Savannah, GA	El Reno, OK
Ames, IA	Wyndmoor, PA
Peoria, IL	Brownwood, TX
West Lafayette, IN	Temple, TX
Beltsville, MD	Weslaco, TX
East Lansing, MI	Madison, WI
Greenport, NY	

Question. Describe the nature of the work and the estimated cost for each site.

Answer. A description of the nature of the work and the estimated cost for each planned site in fiscal years 1997 and 1998 is provided below. The costs have been estimated using fiscal year 1996 cost data and remediation information. The estimates are subject to increases/decreases as the project requirements become better defined through investigative and planning activities.

Shafter, CA: Drywell Remediation	\$75,000
Savannah, GA: RCRA Sampling and Remedial Actions	220,000
Ames, IA:	
Underground Storage Tanks/Remedial Actions	20,000
Site Investigation/Additional Sampling	30,000
Peoria, IL:	
Sampling and Remedial Actions	80,000
Underground Storage Tanks Removals/Replacements	225,000
West Lafayette, IN: Underground Storage Tanks Removals/Replacements	50,000
Beltsville, MD:	
Remedial Investigation/Feasibility Study at National Priorities List Sites	3,008,000
Removal Actions at National Priorities List Sites	1,750,000
Underground Storage Tanks Removals/Replacements	500,000
East Lansing, MI:	
Site Investigation/Additional Sampling	50,000
Underground Storage Tank Removal/Replacement	66,000
Greenport, NY:	
RCRA Site Closure Activities	1,100,000
Removal Actions at Various Sites	400,000
Remedial Investigation/ Feasibility Study	800,000
Underground Storage Tank Removal/Replacement	30,000
Coshocton, OH: Underground Storage Tanks Removals/Replacements	150,000
El Reno, OK: Site Assessment and Remedial Actions	50,000
Wyndmoor, PA: Underground Storage Tank Removal/Replacement	40,000
Brownwood, TX: Site Assessment and Remedial Actions	75,000
Temple, TX: Site Assessment and Remedial Actions	86,000
Weslaco, TX: Underground Storage Tank/Remedial Actions	15,000
Madison, WI: Underground Storage Tanks/Remedial Actions	25,000
Total	8,845,000

Question. What is your estimate of costs, by location, through fiscal year 2002.

Answer. The estimated cost for each location for fiscal year 1998 through fiscal year 2002 is provided below:

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Shafter, CA	\$25,000
Savannah, GA	250,000
Ames, IA	30,000
Peoria, IL	305,000
Beltsville, MD	15,300,000
East Lansing, MI	30,000
Clay Center, NE	300,000
Greenport, NY	7,600,000
El Reno, OK	75,000
Wyndmoor, PA	40,000
Kearneysville, WV	75,000
Temple, TX	150,000
Brownwood, TX	75,000
Total	24,255,000

TRAVEL

Question. Please provide the Committee with a breakdown of your actual travel costs in fiscal year 1996.

Answer. fiscal year 1996 travel costs are as follows:

Common Carrier	\$5,041,459
Mileage Allowance	431,794
Per Diem Allowance	3,557,071
Actual Subsistence	1,706,823
Transfer of Station	1,005,306
Vehicular Transportation	361,656
Miscellaneous Travel Expenses	499,889
Total	12,603,998

Question. Please identify foreign travel obligations for fiscal years 1994, 1995, and 1996, and estimates for fiscal year 1997.

Answer. Foreign travel obligations for fiscal years 1994, 1995, and 1996, and estimates for fiscal year 1997 are as follows:

<i>Fiscal year</i>	
1994	\$2,030,978
1995	1,654,038
1996	2,012,667
1997 est	1,516,300

Question. How many ARS personnel were engaged in foreign trips in these years and for what purposes?

Answer. The number of employees performing foreign trips for these years is as follows: 1,363 in fiscal year 1994; 1,226 in fiscal year 1995; 995 in fiscal year 1996; and 654 estimated for fiscal year 1997.

The majority of foreign travel was to present scientific findings at international conferences, collaborate and review research at international organizations, and collect germplasm and biological control organisms in foreign countries.

MANAGEMENT COSTS

Question. How much will ARS expend for Headquarters management costs in fiscal year 1997?

Answer. ARS will expend approximately \$56.1 million for Headquarters management costs in fiscal year 1997.

Question. How does this correspond to your 10 percent program assessment?

Answer. The \$56.1 million expenditure excludes field management costs for the Area Administrative Offices and Area Directors of \$15.1 million. The combination of these two costs correspond to the Agency's overhead program assessment.

Question. Please list your management and FTE's by function e.g., Personnel, Contracting, Accounting etc., and location for fiscal year 1995 and estimated fiscal year 1996.

Answer.

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WASHINGTON, DC, AREA

Function	Fiscal year 1995		Fiscal year 1996	
	Funding	Staff years	Funding	Staff years
Management	\$34,310,496	249.1	\$36,805,495	250.5
Personnel	7,201,650	156.0	7,841,923	150.6
Financial	1,755,386	29.9	2,069,577	37.2
Contracts	1,911,486	44.4	2,265,562	42.2
Facilities	3,102,685	59.8	2,831,847	42.8
Computer	2,944,041	34.4	3,088,864	52.8
Total	51,225,744	573.6	54,903,268	576.1

OUTSIDE WASHINGTON, DC, AREA

Function	Fiscal year 1995		Fiscal year 1996	
	Funding	Staff years	Funding	Staff years
Management	\$4,499,899	51.0	\$4,033,814	48.0
Personnel	838,224	16.0	770,116	15.6
Financial	2,691,991	52.1	2,473,262	50.1
Contracts	5,365,175	99.8	4,929,245	97.8
Facilities	1,939,738	38.9	1,782,131	36.1
Computer	1,023,601	17.9	940,432	19.1
Total	16,358,628	275.7	14,929,000	266.7

Question. What are your projected management costs and FTE's for fiscal year 1997?

Answer.

WASHINGTON, DC, AREA

Function	Funding	Staff years
Management	\$36,214,716	239.4
Personnel	8,400,016	150.5
Financial	1,822,538	30.5
Contracts	2,224,765	36.7
Facilities	4,104,630	55.9
Computer	3,363,581	48.6
Total	56,130,246	561.6

OUTSIDE WASHINGTON, DC, AREA

Function	Funding	Staff years
Management	\$4,087,600	48.3
Personnel	598,163	15.0
Financial	2,580,371	53.2
Contracts	3,653,333	78.2
Facilities	2,876,769	43.5
Computer	1,361,564	24.1
Total	\$15,157,800	261.8

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According to your responses to Committee questions last year, ARS planned to spend \$69,833,000 for management costs in 1996 and 1997—about 10 per cent.

Question. ARS proposes to reduce headquarters management by \$550,000 in 1998. This amounts to 2 per cent of the ARS proposed reductions of \$23 million in 1998. It appears that research is being reduced at a much greater rate than management. What is your rationale?

Answer. The Agency had, in the past, received reductions in its administrative overhead activities. These administrative savings were, however, offset by corresponding increases for pay and inflation costs thereby eliminating the need for showing actual reductions in these activities. In the fiscal year 1998 Budget, the Agency proposed more specific reductions for administrative activities carried out at Headquarters with follow up reductions in fiscal year 1999 for both Headquarters and field administrative activities. This action is in line with the Agency's policy to reverse the continuing reduction in its scientific force by protecting research related dollars at every opportunity.

Question. According to your response last year, ARS reported as a result of REE management reorganization effective April 30, 1995, combining resources of ARS, CSREES, ERS, and NASS, of over 460 FTE's, you achieved savings of only 3.7 FTE's. This is a negligible savings. Please explain this result.

Answer. The limited savings in FTE were due to a commitment to place all administrative and financial management staff in the new organization.

Question. A major reason for reorganization was to achieve savings in costs and FTE's. By Agency and in total dollar resources, how much money was allocated for management services before the reorganization and subsequently allocated by them.

Answer. The following table reflects the resources allocated to management services before and after the reorganization by Agency:

[Dollars in thousands]

	Before	After
ARS	\$20,272.3	\$19,999.4
ERS	3,306.5	2,783.7
NASS	3,306.5	3,200.1
CSREES	2,223.1	2,972.9
Total	29,108.4	28,956.1

Question. How much money has been saved through this reorganization effort?

Answer. We achieved savings of \$152,300 through this reorganization.

Question. How will ARS implement its \$550,000 Headquarters reductions in fiscal year 1998?

Answer. The reduction of \$550,000 in management costs in fiscal year 1998 is tentatively planned to be applied proportionally to the ARS Headquarters program and administrative support staffs.

Question. How will it achieve proposed management reductions in fiscal year 1999?

Answer. Alternatives to achieve efficiencies in Headquarters and in the field management activities are currently under review and assessment by the Agency leadership.

PANAMA CITY

Question. ARS Explanatory Notes indicates \$898,300 and 4 FTE's located at Panama City, Panama. Describe the programs carried out at this location.

Answer. ARS screwworm research is carried out in Panama City. This program is focused on three principal activities in support of APHIS and FAO screwworm eradication efforts in Central America and the Caribbean region respectively. These include: characterization of screwworm habitats in Panama using remote sensing technology; improvement of screwworm surveillance, trapping and monitoring methods which includes development of an "Artificial Wound" technology for survey and trapping of feral screwworm populations; and conducting studies on ecology, biology and population dynamics of screwworm populations in the Caribbean region.

MONTPELLIER, FRANCE

Question. The ARS Montpellier, France location estimates a program level of \$1,728,700. Please describe the program carried out here.

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Answer. United States agriculture is subjected to a constant invasion of foreign insect and weed pests which gain entry through human immigration and accelerated agricultural trade of diverse commodities. Many of these foreign insect and weed pests enter the United States without any of the natural enemies which keep them at nondamaging levels in their native lands. To combat this threat to U.S. agriculture, forestry, and the environment, the USDA-ARS laboratory in France was established in 1919 to collect and evaluate beneficial natural enemies for eventual import to the U.S. The USDA-ARS laboratory, although located in France, serves as an extension of the ARS domestic program in biological control of invasive insects and weeds. Operationally, the laboratory staff searches for natural enemies of pests in appropriate areas of origin ranging from Europe, Central Asia, and Africa. In cooperation with scientists and quarantine officials in the United States, the ARS staff in France conducts carefully planned tests of natural enemies to ensure that they are safe to U.S. agriculture according to established quarantine procedures. The USDA-ARS laboratory in France provides about 70 percent of all biological control organisms to researchers and cooperators in the United States.

Question. What is the SY capacity of the proposed laboratory? Do you have funds to operate the proposed laboratory at capacity?

Answer. The proposed laboratory is architecturally designed to accommodate the current staff of three ARS scientists which includes one vacancy. The laboratory also will accommodate visiting U.S. scientists, cooperators from U.S. action and regulatory groups, as well as cooperators from foreign research institutions. With present funding levels of \$1,728,700, the research program is adequately funded to operate the laboratory at its full capacity and to accommodate successive TDY visitors of state-side cooperators.

Question. What is the total cost of this laboratory?

Answer. At present, the USDA-ARS laboratory in France is housed in facilities leased from French institutions. To establish the laboratory in Montpellier, two hectares of land were purchased by USDA in 1993 and an architectural design was completed in 1995. The total cost for construction of the permanent facility, at the prevailing Franc/Dollar exchange rate, is \$3.7 million, of which \$3 million of the necessary funding will come from anticipated French financial assistance toward USDA-ARS implantation in Montpellier.

Question. What kind of lease cost comparison has the Agency completed in determining the need for another U.S. laboratory in France?

Answer. The Agency is proposing that a permanent laboratory facility be constructed to relocate present research activities from temporary leased facilities at a savings to U.S. taxpayers. The current short term lease cost is \$197,000 annually including operation and maintenance costs. The facilities being leased are temporary laboratories with minimal quarantine and office space, and inadequate safety features that do not meet the Agency's minimum facility requirements. The proposed new laboratory facility after construction will cost \$130,000 annually to operate and maintain. The proposed facility is necessary to provide adequate laboratory and quarantine space which would otherwise be more costly to lease.

Question. What is the long-term plan for biocontrol research activities in France?

Answer. This USDA laboratory in France has been utilized for 78 years by ARS scientists and state-side cooperators to provide biocontrol agents for immigrant insect and weed pests and thus to protect U.S. Agriculture. As foreign pests continually enter the United States, this ARS laboratory will be a key element for the foreseeable future in the USDA biological control strategy for the long term well-being of U.S. agriculture.

FOREIGN LOCATIONS

MONTPELLIER, FRANCE

Question. Your request for construction is \$3.4 million in the 1998 budget. If the Congress provides these funds, will this be sufficient to meet your program requirements?

Answer. The total fiscal year 1998 appropriation need of \$3.4 million for the new USDA-ARS laboratory in France will be sufficient to meet program needs. It is expected that French subventions totaling \$300,000 will be made available in view of the overall project cost of \$3.7 million.

Question. Does the Agency have plans to add or expand laboratory and related facilities?

Answer. The new USDA-ARS laboratory in France will provide 850 gross square meters of office, laboratory, and headhouse/greenhouse space to operate in an efficient and effective manner. While the Agency has no plans to add to the facilities, the project, as designed has the capability of being expanded in out years if future

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domestic pest problems were to require an accelerated program for discovery and evaluation of beneficial biological control organisms.

BUENOS AIRES, ARGENTINA

Question. ARS is also located at Buenos Aires, Argentina. Describe the program carried out here.

Answer. The Buenos Aires location primarily serves as a support facility for insect and weed control programs significant to the United States. The primary scientific area of emphasis is the biological control of exotic insect and weed pests from South America. Several weed species common to Florida and the American Southwest have their source of origin in Patagonia, the Pampas, or the tropical regions of Brazil and the tropical Parana River Basin of Brazil, Argentina and Paraguay.

Among the primary target insect species are fire ants, corn rootworm, corn earworm and sweet potato/silverleaf whitefly. Among the economically important weeds are water hyacinth, tropical soda apple, snakeweed, itchgrass and hydrilla.

In addition to funding support from participating ARS laboratories in the U.S., particularly Gainesville, Florida, the ARS Buenos Aires Laboratory (SABCL) maintains cooperative relationships with the University of Arkansas, the Army Corps of Engineers, South Florida Water Management District, APHIS (USDA), and international research institutions.

Question. List accomplishments resulting from the work at this location.

Answer. Currently, fire ant is the primary Target insect of the ARS Buenos Aires research program (SABCL). Promising beneficial parasitic wasps and pathogens of the ant have been discovered by SABCL personnel in Central Brazil. A parasitic wasp has been identified and evaluated under quarantine conditions and is in the final stage of clearance for field release in Florida.

Increasingly, water hyacinth, an exotic weed introduced from the Parana Basin of Brazil, has created major water management problems in the Gulf States and Florida. Similar infestations in Africa have gained major international attention. In March 1997, the World Bank hosted an international Water Hyacinth Conference in Washington, D.C. As a consequence of these proceedings, SABCL, in cooperation with other Federal agencies, universities and research institutions will be involved in a coordinated effort to attack this problem. SABCL, with a permanent institutional base at the source of origin of hyacinth, is ideally situated to take the lead in exploratory activities designed for biological control. Several herbivorous beetles have been collected and are now under evaluation for use as biological control agents in the U.S.

BUILDINGS AND FACILITIES

Question. Please provide the Committee with costs and projects completed and planned for the modernization of each of ARS' Regional Research Centers.

Answer. The Department has established a Facility Task Force to investigate the utilization of Agricultural research facilities. Pending the results of this Task Force, the status of modernization efforts at the four Regional Research Centers is as follows:

Southern Regional Research Center (SRRC).—The SRRC Modernization involved a complete renovation of the surrounding site and Chemical Wing and included such items as asbestos abatement, new and upgraded drainage, landscaping, equipment pads, pavement repairs, retaining walls, and handicapped ramps. Work to the interior of the building will include replacement of HVAC systems, reconfiguring each laboratory module, new stairwell to comply with safety codes, replacement of floor finishes, new windows and complete patched, primed, and painted walls and ceilings as necessary. Total cost is estimated at \$17.8 million, phased over 9 years.

The design of the Chemical Wing project is complete. Construction for Phase I was awarded in fiscal year 1991 for \$1.4 million. Phase II was awarded in fiscal year 1992 for \$2.4 million using Agency funds. Phases III, IV, and V were awarded in fiscal year 1992 for \$5 million. (In fiscal year 1992, \$1,950,000 was specifically appropriated for Phase II. However, this budget line item amount was not sufficient to pay the cost of Phase II which totals \$2.7 million for construction, contingency, and architect-engineer inspection services. The \$1,950,000 was used to award Phase V.) In fiscal year 1994, \$2.667 million was appropriated for Phase VI of the Chemical Wing and in fiscal year 1995, \$2.934 million was appropriated for construction of Phase VII. These phases were awarded in fiscal year 1996. Design and construction of Phase I site repair work was funded using \$1,651,000 in fiscal year 1993 appropriations. The fiscal year 1996 appropriation of \$900,000 was used to award Phase 2 of the site repair work.

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The remaining elements of SRRC that need to be modernized are the Administration Wing, Textile Wing, and the Industrial Wing. It is estimated the completion of the SRRC modernization program will require an additional \$22.65 million.

Eastern Regional Research Center (ERRC).—In fiscal year 1993, ARS completed the facility modernization study begun in fiscal year 1992. The findings indicate that the utilities and building infrastructures have reached the end of their useful lives, and the facility itself has been overtaken by the evolution of codes, Agency criteria, and research needs over the past 50 years.

The proposed modernization program will occur in 9 phases with a total planning, design, and construction budget of \$39 million over 9 years.

In fiscal year 1994, ARS funded design of Phase I (Service Building) and Phase II (Engineering Research Laboratory in Pilot Plant) with \$595,000 in Repair and Maintenance funds. In fiscal year 1995, ARS funded construction of Phase I, and design of Phases III through VII, using \$4,175,000 in Repair and Maintenance funds. In fiscal year 1996, ARS funded construction of Phase II using \$4,100,000 in Repair and Maintenance funds. In fiscal year 1997, \$4,700,000 was needed to fund construction of Phase III, and \$4 million was appropriated.

In fiscal year 1988, \$5,200,000 is needed to complete funding of Phase III and fund construction of Phase IV leaving a balance of \$20,851,000 to complete modernization. This additional modernization need will be met with a combination of Repair and Maintenance and Building and Facility funds.

Western Regional Research Center (WRRC):

1. WRRC modernization includes the upgrade of outside utilities and complete renovation of the North Wing. The renovation includes asbestos and lead abatement, upgrade of existing HVAC system, laboratory reconfiguration to comply with safety and accessibility codes, replacement of all laboratory counters and tops, replacement of floor and windows, and completely patch, prime, and paint walls and ceilings as necessary. Total cost is \$29.6 million phased over a 7-year period.

2. The design is complete for all phases. Phases I and II were awarded in fiscal year 1990 for \$5.9 million. Phase III was awarded in fiscal year 1991 in the amount of \$3.4 million. Phase IV was awarded in fiscal year 1993 in the amount of \$3.0 million. Phases V and VI were awarded in fiscal year 1993 in the amount of \$4.4 million and \$3.2 million. Construction for Phase VI is expected to be complete by the third quarter of fiscal year 1997.

3. Total construction funds committed to date for 6 phases—\$23.5 million.

4. In fiscal year 1997, \$6.08 million is available to award Phase VII construction and A-E support services. In fiscal year 1994, fiscal year 1995, and fiscal year 1997 \$1.161 million, \$.919 million, and \$4.0 million were appropriated for construction of Phase VII. The Area funded all necessary fine tuning costs. Construction for Phase VII is expected to be complete by the fourth quarter of fiscal year 1998.

5. The Small Animal Facility (West Annex Building) planning, design, and construction is complete for Phase I. Design of Phases II and III was completed in the third quarter of fiscal year 1994. The construction of Phases II and III was awarded in the fourth quarter of fiscal year 1994. Construction was completed in the fourth quarter of fiscal year 1996. The design and construction costs for all three phases is approximately \$5.0 million.

6. A construction contract was awarded in September 1995 using Agency funds in the amount of \$800,000 to upgrade the building envelope of the Research and Development Facility (RDF) (Pilot Plant) which includes Food Processing Laboratory and Industrial Processing Laboratory. Concurrently, a program of requirements is being developed using Agency funds, \$180,000, for the modernization of RDF. This facility occupies the south wing of WRRC encompassing approximately 21,000 square feet of space. The estimated design and construction cost for this project is \$15,000,000.

National Center for Agricultural Utilization Research (NCAUR):

1. The National Center for Agricultural Utilization Research is currently proceeding with a facilities upgrade design and construction program, as follows:

Phase IA—Utility Tunnel, Steam Lines, and Boiler: Construction contract was awarded in the fourth quarter of fiscal year 1991. Construction was completed in the second quarter of fiscal year 1995. Total project cost of \$2.5 million is for construction.

Phase IB—Electrical and Drain System Upgrade: Construction contract was awarded in the third quarter of fiscal year 1992. Total cost of \$.9 million is for construction. Construction was completed in the first quarter of fiscal year 1994.

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Phase IID—Pilot Plant and Semi-Works Building Upgrades: Total cost for design is \$1,825,000 which was appropriated in fiscal year 1992. The design for Phase II was awarded in fiscal year 1992 and is complete.

2. Appropriations to Date: fiscal year 1992—\$1,825,000 Planning and Design for Phase II Pilot Plant; fiscal year 1993—\$1,545,000 Planning and Design for Phase III Chemical Wing.

3. In fiscal year 1996 and fiscal year 1997, \$3.9 and \$1.5 million has been appropriated instead of \$11.7 million requested to implement modernization efforts. A revised phasing plan was necessary to renovate the Pilot Plant and Semi-Works Building. A phased renovation plan was developed in fiscal year 1996 and recommended a three-phase renovation plan for the North Wing. The initial phase (Segment I of Phase IID) will renovate four modules of the Pilot Plant, add mechanical rooms and an exterior stairway. Estimated planning, design, and construction cost is \$5.4 million for this segment. Construction will be awarded in the fourth quarter of fiscal year 1997.

4. The remaining two segments are: Segment 2 of Phase IID: This segment will renovate adjoining areas in the North Wing. General laboratory, support space, and testing facilities will be provided to support the Pilot Plant modules. The Semi-Works Building will be renovated to support infrastructure of the Center. Estimated planning, design, and construction cost of \$8.0 million is needed in fiscal year 1998. Segment 3 of Phase IID: This segment will renovate additional laboratory, support space, and testing facilities will be provided to support the Pilot Plant modules. Estimated planning, design, and construction cost is \$8.4 million (escalated to 1999).

5. Additional funding needed which has been escalated to the planned year of implementation is \$70.2 million. This will complete planned modernization efforts at the Center.

Question. Please provide the Committee with an update of the costs and projects completed and planned for the modernization of the Beltsville Agricultural Research Center.

Answer. Beltsville Agricultural Research Center (BARC):

Through fiscal year 1997, a total of \$103,416,792 has been expended on the modernization of BARC. The attached is a listing of projects that have been completed, initiated, or are proposed for fiscal year 1998. The funding source for these projects is the Building and Facility Modernization funding.

Projects currently underway include the construction of a Controlled Environment Facility. This will consolidate plant growth chambers in one building which will reduce staffing needs to monitor the chambers as well as increase energy efficiency. Construction of the gut and rebuild of Building 004 (Plant Sciences) is scheduled to begin in July 1997.

In fiscal year 1998, BARC plans to utilize the limited funding to upgrade the infrastructure of the Center Road Building Complex Area. This will prepare the area for the proposed construction of the Human Nutrition Wing (70,000 square feet), as well as the gut and rebuild of the existing Human Nutrition Building—Building 308 (69,300 square feet). Future work in this area includes the gut and rebuild of the adjacent Buildings 306 and 307; these facilities are needed for modernization of the Livestock and Poultry Sciences Institute. The design of the Human Nutrition Wing is scheduled to begin in late fiscal year 1997, in anticipation of construction funds in fiscal year 1999.

The clustering of animal buildings is another priority of BARC. A site plan for all animal buildings has been completed. As funds become available, design and construction will begin. This will ensure that BARC's animal buildings satisfy all animal care guidelines. In fiscal year 1998, a new Feed Center will be built near the Dairy Complex. This will replace the existing out-dated granary facility. In future years, BARC plans on gutting and rebuilding Building 200 (52,000 square feet) which is used for research on livestock and poultry-related issues. We anticipate that the design of a new swine parasitology barn will be awarded by early fiscal year 1998 with construction scheduled immediately after the design is complete. The design of two new poultry barns is also scheduled for award during fiscal year 1998. Funds for construction of the new poultry buildings will be included in future budget requests. This will advance the clustering of animal buildings which is needed for security reasons. Additional infrastructure upgrades will be needed to support renovated buildings and additional research facilities on the east side of BARC.

Beltsville Agricultural Research Center (BARC) Modernization—Fiscal year 1988

Renovate Building 007	\$2,000,000
Design Building 003	660,859
Renovate Abattoir, Building 204	57,446
Renovate Building 303	506,877

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Modify HVAC, Building 306	372,270
Water Lines	1,402,195
Miscellaneous Projects, BARC (under \$100,000)	374,234
Repair Building 307	88,064
Repair Building 467	10,835
Repair Building 264	5,480
Small Animal Facility Contingency	271,740
Total	5,750,000

Fiscal year 1989

U.S. National Arboretum Roof Repairs	\$300,852
U.S. National Arboretum Greenhouse Electrical Repairs	273,200
Steam Lines, Phase IV	1,100,000
Oil to Gas Conversion	328,237
Renovate Building 203 (Boar Facility)	529,026
U.S. National Arboretum, Relocate Service Road	87,643
Hazardous Waste Marshalling Facilities	79,662
Waste Water Treatment Study	194,864
Renovate Building 204	354,335
Beltsville Area Security	91,806
Pesticide Handling Facilities	441,793
Swing Space	274,100
Miscellaneous Projects	44,482
USNA Brickyard	2,000,000
Total	6,100,000

Fiscal year 1990

Steam Lines, Building 169-179	\$568,752
Steam Lines, Buildings 001-011A	1,407,084
Range 2 Modernization	690,574
Waste Water Treatment Facility	1,100,056
Electrical Distribution System	574,157
BARC Roads	361,027
Animal Parasitology Unit Planning	30,282
HVAC System, Building 050	44,598
Repair Embankment Failure	211,135
Powder Mill Road	1,547,588
Swing Space	103,685
Brooder House	230,000
Renovate Building 043, 046, 047	148,591
Annual Painting	200,098
Annual Roofing	247,582
U.S. National Arboretum Storage Building	90,402
U.S. National Arboretum Plastic Greenhouses (3)	235,687
Demolition of Facilities	27,985
Replace Chiller, Building 006	103,965
Renovate Building 209	71,693
Renovate Headhouse 16	35,124
Repairs Building 177B	12,465
Repairs Building 211	7,965
Renovate Building 1120	18,391
Elevator, Building 449/Gas Cyl	50,954
Renovate Building 449	4,865
Key Card Security Gate	37,002
Small Miscellaneous Projects	625,031
Repairs, Building	15,000
Contingency Steam Lines	297,170
Contingency	197,604
Replace Roof, Building 012	139,000
Contingency	194,488
Total	9,860,000

Fiscal year 1991

Addition, Building 426	\$65,000
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Conference Room, Building 005	435,000
Electrical	1,500,000
Building 001	735,000
Plant Sciences Building	1,100,000
Dairy Research Facility	2,186,330
Central Hay Storage	803,670
Repair Building 201	50,000
BARC-East Waste Water Treatment	6,534,000
Building 200 Modernization	60,000
Renovate Building 007	1,290,000
Demolition	198,904
Swing Space	991,888
Contingency	50,000
Total	15,999,792
<i>Fiscal year 1992</i>	
Renovate Range 2 Greenhouse Complex	\$3,100,000
Repair/Replace Waste Water Treatment Facility	300,000
Construct Plant Sciences Building	12,600,000
Total	16,000,000
<i>Fiscal year 1993</i>	
Range 2 Greenhouse Complex	\$7,400,000
BARC-West Waste Water Treatment Plant	4,000,000
BARC-East Water System	600,000
Controlled Environmental Chamber Facility	586,000
Office/Laboratory Economic Analysis	200,000
Animal Space Economic Analysis	230,000
Contingencies	531,000
Total	13,547,000
<i>Fiscal year 1994</i>	
Modernize Building 001	\$9,700,000
Modernize East Potable Water System	7,400,000
Design New Animal Building	530,000
Upgrade West Electrical System	1,500,000
Design to Modernize Building 004	450,000
Contingencies	120,000
Total	19,700,000
<i>Fiscal year 1995</i>	
Modernize Building 004	\$3,960,000
Total	3,960,000
<i>Fiscal year 1996</i>	
Construct Controlled Environment Facility	\$4,700,000
Design/Construct Infrastructure in 300 Area	2,000,000
Contingencies	310,000
New Animal Building Design	615,000
Cooling Tower for Building 004	375,000
Renovate Building 001	250,000
Total	8,000,000
<i>Fiscal year 1997</i>	
Design New BHNRC Building	\$1,700,000
Infrastructure Upgrades BARC-East	1,400,000
Fiber Optic Backbone Cabling	700,000
Contingencies	700,000
Total	4,500,000
Total for fiscal year 1988 through fiscal year 1997	103,416,792

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Proposed fiscal year 1998

Construct New Feed Center	\$1,970,000
Fiber Optic Backbone Cable	850,000
Contingencies	380,000
Total	<u>3,200,000</u>

BUILDINGS AND FACILITIES

Question. Please provide the Committee with costs and projects completed and planned for the modernization of the Plum Island Animal Disease Center.

Answer. Plum Island Animal Disease Center (PIADC): Modernization projects at PIADC are as follows:

Fiscal year 1992

Consolidation (C)	\$18,400,000
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Fiscal year 1993

Underground Storage Tank Removal/Replacement (C)	\$443,000
Wastewater Treatment Plant (C)	185,000
Boiler Rental (C)	304,000
Incinerator Repair (C)	74,000
Environmental Assessment (S)	33,000
Chiller Plant (C)	1,400,000
Sludge Removal (C)	500,000
Miscellaneous Projects	784,000
Total	<u>3,723,000</u>

Fiscal year 1994

Wastewater Treatment Plant (C)	\$1,250,000
Miscellaneous Projects	741,250
Total	<u>1,991,250</u>

Fiscal year 1995

Above-Ground Fuel Tanks (Phase I) (C)	\$1,168,000
Miscellaneous Projects	747,000
Total	<u>1,915,000</u>

Fiscal year 1996

Upgrade Fire Alarm System B-101 (D/C)	\$1,000,000
Above-Ground Fuel Tanks (Phase 2) (C)	1,000,000
Wastewater Treatment Plant Closure (C)	1,500,000
Boiler Plant Design	500,000
PCB Transformer Replacement (D/C)	51,000
Miscellaneous Projects	1,006,000
Renovate B-102 (D)	250,000
DOE-National Renewable Energy Lab Support	280,000
Plum Island Harbor Repairs (D/C)	1,514,000
Install Chiller (D/C)	900,000
Electric/Telephone Distribution System (D)	199,000
Total	<u>8,200,000</u>

Fiscal year 1997

Above-Ground Fuel Tanks (Phase 3) (C)	\$1,400,000
Underwater Electric Cable (C)	2,000,000
Sewage Decon Plant (D)	500,000
Miscellaneous Projects	500,000
Upgrade Pathological Incinerators (D)	400,000
Electric/Telephone Distribution System (C)	2,800,000
Energy Savings Performance Contract Windmill Proposal(s)	600,000
Total	<u>8,200,000</u>
Total for fiscal year 1992 through fiscal year 1997	42,429,250

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Future modernization efforts at PIADC will address numerous infrastructure and physical plant repair and improvements. While the original modernization plan was estimated at \$81 million in fiscal year 1995 dollars, inconsistent funding levels have resulted in a higher cost.

Question. Please provide the Committee with costs and projects completed and planned for the modernization of the Subtropical Agricultural Research Laboratory at Weslaco, Texas.

Answer. The Modernization Plan for the Subtropical Agricultural Research Laboratory in Weslaco, Texas, established six phases for execution as listed below:

Phase 1: Planning and Design—This phase completed the Environmental Assessment for the entire modernization effort and initiated the Program of Requirements for Phases 2 and 3. Demolition of some existing dilapidated buildings was accomplished during this phase.

Construction Cost—\$93,000

Planning and Design Cost—\$322,000

Status—Design and construction was completed in the first quarter of fiscal year 1996.

Phase 2: Site Preparation and Utility System Upgrade—Projects in this phase upgrade the water, sanitary, electrical, and storm drainage systems at the main laboratory campus. Recently acquired property is cleared of existing structures in preparation for a new laboratory facility to be constructed in Phase 3. Some grading and landscaping work is accomplished as well as construction of a new entrance road serving the site.

Construction Cost—\$1,278,000

Planning and Design Cost—\$69,800

Status—Design efforts for the Phase 2 projects are completed.

Construction contract was awarded in July 1996.

Phase 3: Construct New Laboratory Facility, Building N-01—This phase constructs a new laboratory and office building of approximately 24,700 gross square feet. The new facility will house the Crop Quality and Fruit Insect Research Unit as well as the Laboratory Director and administrative support staff. Also included in this phase is renovation of two existing greenhouses and construction of four new greenhouses.

Construction Cost—\$6,773,000

Planning and Design Cost—\$570,400

Status—Design for the new laboratory is complete. Construction contract award is anticipated in July 1997. Design for the renovation of two greenhouses and construction of two greenhouses is completed. A construction contract was awarded in April 1997. Design for the remaining two greenhouses has not started. The construction of these facilities is partially funded.

Phase 4: Construct Operations Support Facilities and Renovate Research Facilities—This phase constructs a pesticide storage and handling facility, farm implement storage facility, and a shipping and receiving facility. It includes renovation of the primary existing research building as well as headhouse and greenhouse space on the main research campus, Highway 83 site.

Construction Cost—\$4,290,300

Planning and Design Cost—\$377,200

Status—Design for the operations support facilities has been completed, construction is scheduled for fiscal year 1998. The design for renovation of the research facilities began in fiscal year 1997 and award of a construction contract is scheduled in fiscal year 1998. These construction projects are not currently funded.

Phase 5: Renovation of Existing Laboratory Facilities—This phase renovates existing headhouse and laboratory space in Buildings 205, 221, 414, and 202 located at both the Highway 83 campus and the FM1015 site.

Construction Cost—\$2,890,400

Planning and Design Cost—\$218,300

Status—The design for renovation of these research facilities is scheduled to begin in fiscal year 1998 and award of a construction contract in fiscal year 1999. The design and construction of these projects is not currently funded.

Phase 6: Renovation of Existing Laboratory Facilities—This phase completes renovation of the existing laboratory facilities in Buildings 203 and 204 located at the Highway 83 campus. It also accomplishes demolition of existing facilities which have been retained as swing space during the modernization effort.

Construction Cost—\$3,218,900

Planning and Design Cost—\$328,100

Status—The design for renovation of these research facilities is scheduled to begin in fiscal year 1998 and award of a construction contract in fiscal year 1999. The design and construction of these projects is not currently funded. The total estimated

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planned, design, and construction costs for the modernization at this facility is \$20.5 million.

Question. Please provide obligations to date and projected funding requirements for major modernization projects planned by ARS.

Answer. Obligations and projected funding requirements are as follows:

Modernization location	Obligations to date	Balance of funding required
California—Albany	\$38,270,227	\$15,000,000
Illinois—Peoria	4,780,600	70,200,000
Iowa—Ames	1,620,550	139,000,000
Louisiana—New Orleans	17,836,000	22,650,000
Maryland:		
Beltsville	73,072,837	102,000,000
NAL		18,000,000
Michigan—East Lansing	462,000	18,100,000
New York—Plum Island	15,829,000	66,000,000
Pennsylvania—Wyndmoor	4,870,000	25,700,000

The “Balance” represents remaining modernization project funding requirements that were either originally identified via facility condition studies, the development of Program of Requirement documents, in-house estimates, or design drawings. Obligations to date for these projects was either congressionally funded through the Agency’s Buildings and Facilities account, or through the Agency’s Annual Repair and Maintenance budget line item appropriation.

Question. Please provide obligations and projected funding requirements for each major new construction project.

Answer. Obligations and projected funding requirements for each major new construction project are as follows:

Construction locations	Obligations to date	Balance of funding required
California—Parlier	\$1,503,716	\$23,400,000
Florida—Ft. Lauderdale	43,000	4,000,000
France—Montpellier	500,000	3,400,000
South Carolina—Charleston	1,176,570	14,030,000
Texas—Lubbock	1,367,079	.....

The “Balance of Funding Required” represents remaining construction project funding requirements that were either originally identified via the development of Program of Requirement documents, in-house estimates, or design drawings. Funding to date for these projects was either congressionally funded through the Agency’s Buildings and Facilities account, or through the Agency’s Annual appropriation.

Question. The Committee appropriated \$18.3 million to ARS for Repairs and Maintenance of Facilities in fiscal year 1996. How were these funds used?

Answer. The fiscal year 1996 repair and maintenance budget was \$18.262 million. This amount includes \$14.246 million in Agency funds, \$900,000 for the National Agricultural Library, \$740,000 for the USNA, and \$2.376 million in BARC Renaissance 1993 funds. Some of the types of repair and maintenance projects funded in fiscal year 1996 include: bridge repairs, roof repair, HVAC repair, plumbing repairs, upgrade to sewage lines, electrical repairs, fencing replacement, painting, pavement repair, asbestos and lead abatement, accessibility projects, and replacement of fire alarm systems.

Question. What are the planned use of these funds in fiscal year 1997?

Answer. Some of the types of repair and maintenance projects scheduled in fiscal year 1997 include: upgrades to building systems such as HVAC, plumbing, sewage lines, water treatment facilities, electrical, roof repairs, accessibility requirements, CFC replacement, asbestos, and lead abatement; removal of underground storage tanks; correcting building and life safety code deficiencies; repair of pavement; energy surveys and retrofits, and harbor repairs.

Question. The Budget Appendix reflects year-end 1995 unobligated balances for \$105 million for Building and Facilities. Identify these balances by project.

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Answer. The Budget Appendix reflects a year-end 1996 (September 30, 1996) unobligated balance of \$79.1 million for Building and Facilities. The balance by project is as follows:

<i>Location</i>	<i>Balance</i>
Arizona, Maricopa—Water Conservation Laboratory	\$396,000
Arkansas, Stuttgart—Rice Center	1,064,604
California:	
Albany—Western Regional Research Center	3,370,443
Parlier—Horticultural Crop Research Laboratory	2,630,000
Riverside—U.S. Salinity Laboratory	881,353
Colorado, Ft. Collins—Storage Laboratory	117,648
District of Columbia, National Arboretum	(9,896)
Florida, Ft. Pierce—Horticultural Laboratory	4,524,982
France, Parlier California, Florida	470,001
Hurricane Andrew/Iniki—Florida, Hawaii, Louisiana	13,053,794
Georgia, Athens—Poultry Disease Laboratory	935,665
Illinois, Peoria—National Center for Agriculture Utilization Research	5,165,176
Indiana, Lafayette—Purdue University	9,892
Iowa, Ames—	
Swine Center	2,111,664
National Animal Disease Center	411,745
Kansas, Manhattan—Grain Marketing Research Laboratory	1,201,641
Louisiana, New Orleans—Southern Regional Research Laboratory	889,293
Maryland, Beltsville—Modernization	16,272,258
Massachusetts, Boston—Nutrition Center	33,031
Michigan, East Lansing—Regional Poultry Research Laboratory	2,327
Minnesota, Morris—Soil and Water Laboratory	43,454
Nebraska, Clay—Meat Animal Research Center	19,985
New York, Greenport—PIADC	4,693,853
North Dakota, Fargo—	
Research Laboratory, North Dakota State University (NDSU)	14,561
Greenhouse, NDSU	4,781
Oklahoma:	
Lane—Farm Experiment Station	231
Lane—Agricultural Research Facility	44,860
Woodward—Greenhouse	355
Oregon, Corvallis—Northwest Small Fruit Center	5,198
South Carolina, Charleston—	
Feasibility Study	635
Construction Vegetable Laboratory	9,460,795
Texas:	
Lubbock—Plant Stress Laboratory	5,534,207
Lubbock—Cons Moisture Laboratory	1,714
Weslaco—Plan ARS Bee Laboratory	71,287
Weslaco—Southern Agricultural Research Center Modernization	3,788,340
Washington, Yakima—Fruit/Vegetable Laboratory	321
West Virginia—National Aquaculture Center	1,821,651
Wisconsin, Madison—Greenhouse	12,176
Total	79,050,025

It is expected that the unobligated balance at the end of fiscal year 1997 will be \$53,400,000.

Question. Congress appropriated \$3.9 million in fiscal year 1994 to complete the construction of the Necropsy incinerator and at the National Animal Disease Center. In fiscal year 1996, Congress agreed to the department reprogramming request providing an additional \$700,000 to complete this project. When will this project be completed?

Answer. The contract completion date is June 30, 1997. However, due to delays in shipping, the high efficiency particulate air (HEPA) filters, which are critical to the overall biocontainment, the Necropsy/Incinerator building may not be completed until August 29, 1997.

Question. The Committee understands that once the Necropsy incinerator facility is complete, there will remain serious biocontainment problems. Is this true? Please explain? How much more money will be required to remedy this problem and how will it be financed?

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Answer. Currently the NADC does high-level biocontainment work in Buildings 3 and 4. Pathological waste generated in these buildings is incinerated in the Building 4 incinerator (the incinerator in Building 3 is only used on an emergency or backup basis because of its deteriorating condition). After the Necropsy Incinerator facility is completed and operating, high-level biocontainment waste will be incinerated in this facility and in Building 4.

However, there will be a need for an animal transport vehicle to transport live infectious, or potentially infectious animals from the area where the research is conducted to the Necropsy Incinerator facility. Materials from other containment buildings, including Building 3, will have to be transported to either Building 4 or the Necropsy Incinerator facility for disposal. This animal transport vehicle must be able to connect via a containment air seal to both the source containment building and the Necropsy Incinerator facility, and be able to maintain Biosafety Level 3-Ag containment security while transporting the animal from the research building to the appropriate incinerator building.

The cost of a Biosafety Level 3-Ag transport vehicle for large animals and associated work to the existing buildings has not yet been determined. It is anticipated that additional Building and Facilities funds will be required for construction of this specialized vehicle.

In the preliminary design, the Necropsy Incinerator facility was to be connected to Building 3 in order to address this transportation problem. However, due to limited funding, and other technical and logistical problems associated with relocation of existing Center utilities and the feasibility of upgrading containment of Building 3, the facility was constructed as a stand-alone building. This decision was consistent with the NADC needs identified in the Facility Condition Study being completed at that time.

The NADC has other existing biocontainment problems that have been identified in the 1992 Facility Condition Study. This fiscal year, the Agency plans to fund the development of a Master Plan that will provide the roadmap for the process by which existing facilities at NADC will be modernized to meet current requirements and standards.

Question. Your justification for BARC modernization states costs in excess of \$190 million, yet the fiscal year 1998 request is only \$3.2 million toward this effort. Which is realistic, the \$190 million requirement or the 1.5 percent increase requested to meet this need?

Answer. The \$190 million plus requirement is a realistic estimate of the cost to modernize BARC. The limited increase requested in fiscal year 1998 is due to other higher priority ARS facility project needs. Each year every project must compete with other Agency and Department projects for funding, and decisions are made accordingly.

Question. Each year modernization funds are requested for various phases of ARS utilization centers. Provide for each center, phases completed and the work and costs involved. Also, provide the remaining phase, cost and work to be done.

Answer. The Department has established the Strategic Planning Task Force as required by the 1996 Farm Bill to investigate the utilization of Agricultural research facilities. Pending the results of this Task Force, modernization plans at the four ARS utilization centers are as follows:

Southern Regional Research Center (SRRC).—The SRRC Modernization involved a complete renovation of the surrounding site and Chemical Wing and included such items as asbestos abatement, new and upgraded drainage, landscaping, equipment pads, pavement repairs, retaining walls, and handicapped ramps. Work to the interior of the building will include replacement of HVAC systems, reconfiguring each laboratory module, new stairwell to comply with safety codes, replacement of floor finishes, new windows and complete patched, primed, and painted walls and ceilings as necessary. Total cost is estimated at \$17.8 million, phased over 9 years.

The design of the Chemical Wing project is complete. Construction for Phase I was awarded in fiscal year 1991 for \$1.4 million. Phase II was awarded in fiscal year 1992 for \$2.4 million using Agency funds. Phases III, IV, and V were awarded in fiscal year 1992 for \$5 million. (In fiscal year 1992, \$1,950,000 was specifically appropriated for Phase II. However, this budget line item amount was not sufficient to pay the cost of Phase II which totals \$2.7 million for construction, contingency, and architect-engineer inspection services. The \$1,950,000 was used to award Phase V.) In fiscal year 1994, \$2.667 million was appropriated for Phase VI of the Chemical Wing and in fiscal year 1995, \$2.934 million was appropriated for construction of Phase VII. These phases were awarded in fiscal year 1996. Design and construction of Phase I site repair work was funded using \$1,651,000 in fiscal year 1993 appropriations. The fiscal year 1996 appropriation of \$900,000 was used to award Phase 2 of the site repair work.

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The remaining elements of SRRC that need to be modernized are the Administration Wing, Textile Wing, and the Industrial Wing. It is estimated the completion of the SRRC modernization program will require an additional \$22.65 million.

Eastern Regional Research Center (ERRC).—In fiscal year 1993, ARS completed the facility modernization study begun in fiscal year 1992. The findings indicate that the utilities and building infrastructures have reached the end of their useful lives, and the facility itself has been overtaken by the evolution of codes, Agency criteria, and research needs over the past 50 years.

The proposed modernization program will occur in 9 phases with a total planning, design, and construction budget of \$39 million over 9 years.

In fiscal year 1994, ARS funded design of Phase I (Service Building) and Phase II (Engineering Research Laboratory in Pilot Plant) with \$595,000 in Repair and Maintenance funds. In fiscal year 1995, ARS funded construction of Phase I, and design of Phases III through VII, using \$4,175,000 in Repair and Maintenance funds. In fiscal year 1996, ARS funded construction of Phase II using \$4,100,000 in Repair and Maintenance funds. In fiscal year 1997, \$4,700,000 was needed to fund construction of Phase III, but only \$4 million was appropriated. In fiscal year 1998, \$5,200,000 is needed to complete funding of Phase III and construction of Phase IV leaving a balance of \$20,851,000 to complete Phases V through IX modernization. These phases will complete work in the Chemical and Pilot Plant wings. This additional modernization need will be met with a combination of Repair and Maintenance and Building and Facility funds.

Western Regional Research Center (WRRRC):

1. WRRRC modernization includes the upgrade of outside utilities and complete renovation of the North Wing. The renovation includes asbestos and lead abatement, upgrade of existing HVAC system, laboratory reconfiguration to comply with safety and accessibility codes, replacement of all laboratory counters and tops, replacement of floor and windows, and completely patch, prime, and paint walls and ceilings as necessary. Total cost is \$29.6 million phased over a 7-year period.

2. The design is complete for all phases. Phases I and II were awarded in fiscal year 1990 for \$5.9 million. Phase III was awarded in fiscal year 1991 in the amount of \$3.4 million. Phase IV was awarded in fiscal year 1993 in the amount of \$3.0 million. Phases V and VI were awarded in fiscal year 1993 in the amount of \$4.4 million and \$3.2 million. Construction for Phase VI is expected to be complete by the third quarter of fiscal year 1997.

3. Total construction funds committed to date for 6 phases—\$23.5 million.

4. In fiscal year 1997 \$6.08 million is available to award Phase VII construction and A-E support services. In fiscal year 1994, fiscal year 1995, and fiscal year 1997 \$1.161 million, \$.919 million, and \$4.0 million were appropriated for construction of Phase VII. The Area funded all necessary fine tuning costs. Construction is expected to be complete by the fourth quarter of fiscal year 1998.

5. The Small Animal Facility (West Annex Building) planning, design, and construction is complete for Phase I. Design of Phases II and III was completed in the third quarter of fiscal year 1994. The construction of Phases II and III was awarded in the fourth quarter of fiscal year 1994. Construction was completed in the fourth quarter of fiscal year 1996. The design and construction costs for all three phases is approximately \$5.0 million.

6. A construction contract was awarded in September 1995 using Agency funds of \$.800 million to upgrade the building envelope of the Research and Development Facility (RDF) (Pilot Plant) which includes Food Processing Laboratory and Industrial Processing Laboratory. Concurrently, a program of requirements is being developed using Agency funds, \$.180 million, for the modernization of RDF. This facility occupies the south wing of WRRRC encompassing approximately 21,000 square feet of space. The estimated design and construction for this project is \$15 million.

National Center for Agricultural Utilization Research (NCAUR):

1. The National Center for Agricultural Utilization Research is currently proceeding with a facilities upgrade design and construction program, as follows:

Phase IA—Utility Tunnel, Steam Lines, and Boiler: Construction contract was awarded in the fourth quarter of fiscal year 1991. Construction was completed in the second quarter of fiscal year 1995. Total project cost of \$2.5 million is for construction.

Phase IB—Electrical and Drain System Upgrade: Construction contract was awarded in the third quarter of fiscal year 1992. Total cost of \$.9 million is for construction. Construction was completed in the first quarter of fiscal year 1994.

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Phase IID—Pilot Plant and Semi-Works Building Upgrades: Total cost for design is \$1,825,000 which was appropriated in fiscal year 1992. The design for Phase II was awarded in fiscal year 1992 and is complete.

2. Appropriations to Date: fiscal year 1992—\$1,825,000 Planning and Design for Phase II Pilot Plant; fiscal year 1993—\$1,545,000 Planning and Design for Phase III Chemical Wing.

3. In fiscal year 1996 and fiscal year 1997, \$3.9 million and \$1.5 million have been appropriated instead of \$11.7 million requested to implement modernization efforts. A revised phasing plan was necessary to renovate the Pilot Plant and Semi-Works Building. A phased renovation plan was developed in fiscal year 1996 and recommended a three-phase renovation plan for the North Wing. The initial phase (Segment I of Phase IID) will renovate four modules of the Pilot Plant, add mechanical rooms, and an exterior stairway. Estimated planning, design, and construction cost is \$5.4 million for this segment. Construction will be awarded in the fourth quarter of fiscal year 1997.

4. The remaining two segments are: Segment 2 of Phase IID: This segment will renovate adjoining areas in the North Wing. General laboratory, support space, and testing facilities will be provided to support the Pilot Plant modules. The Semi-Works Building will be renovated to support infrastructure of the Center. Estimated planning, design, and construction cost of \$8.0 million is needed in fiscal year 1998. Segment 3 of Phase IID: This segment will renovate additional laboratory, support space, and testing facilities will be provided to support the Pilot Plant modules. Estimated planning, design, and construction cost is \$8.4 million (escalated to 1999).

5. Additional funding needed which has been escalated to the planned year of implementation is \$70.2 million. This will complete planned modernization efforts at the Center.

Question. Funding of \$3.4 million is requested for fiscal year 1998 to construct a new biocontrol laboratory in Montpellier, France. Funding for this facility has been proposed in the President's budget in previous years but was not approved by the Congress.

The testimony indicates that site acquisition and planning and design work has been completed. When was this funding made available and when was this work completed?

Answer. Two hectares of land for a new laboratory in Montpellier, France, were purchased on September 10, 1992 for \$331,290. Fiscal year 1992 Agency funds were used for this purchase. The architectural design was completed in the fourth quarter of fiscal year 1995. Funding for planning and design was appropriated in fiscal year 1993 in the amount of \$500,000 from miscellaneous appropriations of \$1,200,000.

Question. Why was construction funding for this laboratory not included in the President's fiscal year 1997 request?

Answer. Each year, every project must compete with other Agency and Department projects for funding, and decisions were made accordingly.

Question. What is the total construction cost of this facility?

Answer. The total construction cost for this facility is \$3.7 million of which \$300,000 is expected from French subventions. The fiscal year 1998 appropriation need is \$3.4 million.

Question. Have you determined that ownership is less costly than leasing?

Answer. The Agency has determined that the proposed permanent facility in France will, in the long term operation of the Agency's biological control program, represent a cost savings to U.S. taxpayers. The current short term lease, with inadequate space and facilities, is \$197,000 annually which includes operation and maintenance. The proposed permanent facility, with appropriate quarantine facilities and adequate laboratories, will cost \$130,000 annually to operate and maintain. This cost savings, over the long term will offset the cost of construction and provide superior facilities to conduct an exemplary biological control program.

Question. Why can't research planned for this laboratory be carried out more efficiently by contractors already located in France and Switzerland?

Answer. Montpellier is a major center for agricultural research in Europe and hosts the consortium AGROPOLIS of which ARS is a member. Benefits derived from carefully nurtured relationships with individual scientists and institutions at this location are very important to the Agency's research programs. Yet, this research can be carried out more efficiently by permanent ARS staff than by contractors because ARS Headquarters and NPS maintain direct control of the Agency's program and can respond to emerging and shifting priorities in the United States. ARS has the mandate to meet changing national needs, which contractors are not able. Research funds maintained by a permanent ARS facility contribute to developing a far sighted cost effective, institutional capability which cannot be achieved by contractors who have their own institutional goals. In particular, contractors in Switzerland are geo-

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graphically located far from the natural range of most ARS target pests, and cannot effectively conduct a research program to meet the needs of the Agency.

The fiscal year 1998 request includes \$4 million for a new quarantine facility at Fort Lauderdale, Florida, for research on the control of Melaleuca.

Question. The U.S. Army Corps of Engineers planned and designed this facility. Why isn't the project being completed by the Corps? Why should the USDA pick up the construction cost of this facility?

Answer. The planning and design of the facility by the U.S. Army Corps of Engineers (COE) was actually undertaken at the request of the Agricultural Research Service (ARS). The Administration determined that USDA should pay for the construction cost of this facility since ARS will operate, maintain, and provide leadership for biological control research on Melaleuca and other aquatic weeds or exotic plant species in Florida.

Question. There is an excellent, modern quarantine facility at Stoneville, MS, that is grossly underutilized at the present time. Why is another facility needed for this program?

Answer. The Stoneville quarantine facility is not adequate to conduct Melaleuca biological control studies because: 1) the facility is not, and in all likelihood never will be, quarantine certified for pests that are not in Mississippi or adjacent states; 2) the facility is not designed to hold trees like Melaleuca which is necessary for testing and cultivation; 3) since Melaleuca is not found in Mississippi, all host plants would have to be produced inside the quarantine which is not practical and may not even be possible; 4) even if it would be legal to grow Melaleuca outside of the quarantine facility, it would not be feasible as this subtropical tree would not be able to survive the cold winters; and 5) the cooperating research staffs of ARS, COE, South Florida Water Management District, and the University of Florida are not located in Mississippi.

Question. In fiscal year 1996, the Agency recommended a consolidation of research programs by transferring the Bozeman program to the Sidney, Montana, location. I understand that a new facility (to include Lab/Office, Greenhouse/Headhouses, and a Biocontainment Facility) is now needed to accommodate this consolidation of research programs and that \$600,000 in planning and design funds are needed in fiscal year 1998 for this purpose. Does the Agency agree that this additional facility is needed as a result of this?

Answer. The consolidated programs will preserve the high priority research of current programs and allow for the development of an Integrated Pest Management Center. This is enhanced by (1) the strong grass roots regional support of producers, agribusiness, and researchers organized in a rural development effort; (2) the region is destined to grow agriculturally as it is one of the remaining parts of the Western U.S. with available water resources to significantly increase irrigated acres; and (3) research is viewed by producers and agribusiness as a key to the region's rural development efforts.

TERMINATION OF KENAF RESEARCH

One of the projects proposed for termination is kenaf research which is carried out through an extramural agreement with the Mississippi Agricultural and Forestry Experiment Station (MAFES). MAFES believes that kenaf holds much potential for economic development in Mississippi and the southeastern United States. In recent months, considerable interest in kenaf has been expressed by major corporations in the United States and Japan. Continued research support is vital to stimulate private sector investment which could result in significant acreage of kenaf. With the commercial interest, it would be very poor timing to discontinue the research program.

Question. What is your justification for proposing to terminate the kenaf research program at the Mississippi Agricultural and Forestry Experiment Station?

Answer. Kenaf has long been proposed as a source of fiber for production of newsprint. Nonetheless, it has not gained a foothold in the newsprint market, and at current low newsprint prices kenaf is unlikely to be produced at a suitable cost. Major newsprint producers are committed to wood feedstock, and recycling is increasing in importance, so the future of kenaf for this market is speculative.

The project at the Mississippi Agricultural and Forestry Experiment Station (MAFES), funded through an extramural agreement with ARS, focuses largely on how to produce and harvest kenaf in Mississippi for fiber. Soft commercial interest and market demand, however, does not justify Federal investment in production research for kenaf fiber at this time. Redirection of these funds to various pest management research programs in Mississippi are expected to have a much greater beneficial impact on the agriculture industries and market economies in the mid-south.

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Commercialization of kenaf products has taken place as a result of the ARS funded kenaf program at the Mississippi Agricultural and Forestry Experiment Station (MAFES). Products currently manufactured at the Charleston, MS complex include:

(a) Bio-Sorb, an industrial sorbent and bioremediation agent, distributed by Delta Environmental Services, McComb, MS;

(b) Delta-Dri, a high quality bedding for the animal research industry, distributed by Shepherd Specialty Paper, Kalamazoo, MI;

(c) Lizard Litter, a high quality terrarium ground cover for the retail pet trade, distributed by Energy Savers, Frampton, CA;

(d) Kenaf bark fiber for the interior automotive panels, used by Findlay Industries, Troy, MI;

(e) Kenaf bark fiber for other nonwovens applications, used by Danforth International, Point Pleasant, NJ;

(f) Kenaf bark fiber for pulp/paper applications, used by Ecusta, Pisgah Forest, NC.

Question. Shouldn't kenaf research continue in order to improve efficiency in production, processing, and marketing to assist in further expansion of existing markets?

Answer. With the failure of kenaf to make inroads in the wood pulp market, attention has turned to other uses of the plant, especially the use of the core (not the fiber) as an absorbent. Several commercial applications exist, such as animal bedding, but these are not high-volume applications requiring large acreage of kenaf to be grown. ARS believes that uses of kenaf other than newsprint have limited commercial potential and that the research funding now available for kenaf would have much greater short and long-range impact on market economies if applied to various pest control programs. These include the development of mass propagation technologies for biological control organisms which could lead to the establishment of new, locally-based industries to serve mid-south agriculture.

Funding and support by the Southern U.S. Trade Association has found a significant demand in Japan for kenaf pulp and composite panel products. The report and trade missions suggests that major paper companies in Japan will require over 100,000 mt of kenaf pulp by the year 2000. These same companies have shown interest in investing in pulp mills and composite plants in Mississippi in order to economically transport value-added products to Japan. These include companies such as Oji Paper, Mishima Paper, Yamaha Livingtec, OG Corporation and Marubeni. Senior executives are impressed with the agricultural infrastructure available in Mississippi and the comprehensive kenaf research program at MAFES.

Question. If the kenaf research program is eliminated, don't you believe it would significantly alter the perception of these potential major investors and cripple the opportunity for major economic development in Mississippi and the Southeast?

Answer. ARS believes funding now available for kenaf would have much greater short and long-range impact on market economies in Mississippi and the Southeast if applied to various pest control programs. These include the development of mass propagation technologies for biological control organisms which could lead to the establishment of new, locally-based industries to support agriculture in Mississippi and the Southeast.

The kenaf research and development team hosted and/or provided information to numerous corporations in 1996. These companies are evaluating the technical, economic and environmental advantages of kenaf in their respective industries. Many of these companies are quite impressed with the potential advantages of kenaf and are seriously evaluating commercial use. With a research and development team of some twenty-two scientists at the MAFES, the industrial clients can find the appropriate expert to provide the information required. There is no other public institution in the United States that has this capability.

Question. Without reliable, up-to-date information provided by the public sector, do you believe further kenaf developments are likely?

Answer. Further commercial developments of kenaf using available research information and technology are very likely if a real market demand develops for kenaf products. Good communication between public and private sectors is vital for proper targeting of public research. Considerable information from ARS in-house and sponsored research on kenaf is available to the industry. ARS will work with the industry to transfer technology to industry to foster the development of commercially feasible products and markets. However, kenaf production and processing costs remain high. For a market to develop, the use of kenaf fiber must add considerable value to products, compared to other fibers.

Interest in kenaf commercialization in other states is increasing. Besides Mississippi, commercial developments are in process or planned in Arkansas, Alabama,

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Georgia, Florida, Texas and Delaware. Investors and university personnel utilize MAFES scientists extensively to aid commercialization in the states mentioned.

Question. Without this support from MAFES, don't you believe the momentum for commercialization in other states would be limited?

Answer. MAFES and ARS scientists always have a continuing role to transfer available information and technology arising from past research. Such activities will assist future commercial developments. In Texas, ARS fulfilled its mission by developing and transferring nematode-resistant varieties. Entrepreneurs there are satisfied with the varieties, and are now concentrating on establishing a vertically-integrated industry to reduce costs and improve efficiency. Commercialization will succeed or fail based primarily on the economics of kenaf production and use.

Question. Where else does ARS perform research on kenaf?

Answer. Kenaf research carried out in fiscal year 1997 is conducted at the following locations: College Station and Weslaco, TX; Lane, OK; New Orleans, LA; Stoneville, MS; and Athens, GA.

INSECT REARING FACILITIES

ARS recently submitted an assessment of its insect rearing facilities to the Committee. That report indicates the need for two new insect mass rearing facilities within ARS to support research and control efforts. It proposes that two old and inadequate facilities in Mississippi be combined into a single new facility at Stoneville to enable ARS to develop and support USDA and grower action program in field crop pest control (projected cost of \$10 million); and a Fruit Fly Rearing Research Laboratory in Hawaii to address research needs for fruit fly control in fruit and vegetable crops supporting implementation programs conducted by the States of California and Hawaii, and APHIS (estimated cost of \$5 million).

Question. When does the Administration intend to propose funding for the two new insect rearing facilities the report indicates are needed?

Answer. ARS will continue to consider insect rearing needs as we develop budget proposals for buildings and facilities over the next several fiscal years. ARS will also be guided by recommendations of the Strategic Planning Task Force which has been established in accordance with the 1996 FAIR Act. This Task Force will be making a national assessment of future federal investments for agricultural research facilities.

Question. Was there any planning money for either of these facilities in the Agency's original fiscal year 1998 budget submission to OMB?

Answer. No, the Agency did not request funding for either the Mississippi or the Hawaii insect rearing facilities in the fiscal year 1998 budget submission to OMB.

Question. What amount of planning funds are needed for each of these facilities?

Answer. The estimated amount required to conduct planning and design efforts for the Waimanalo, Hawaii, insect rearing facility is \$500,000, and the amount needed for the Stoneville, Mississippi, rearing facility is \$1,000,000.

With respect to the ARS insect rearing facility planned for Stoneville, MS:

Question. Can the biological control program continue to advance on a major scale without the new facility?

Answer. ARS has identified the area of augmentation biological control as a major new area of technology that needs to be developed to support the USDA Initiative on Integrated Pest Management (IPM) and agrees with the findings of the National Research Council report that research and development on mass propagation of biological control agents needs to be expanded. In anticipation of these needs, ARS has conducted substantial supporting research in this area and has developed new cost effective artificial diets capable of producing large numbers of effective biological control agents. Unfortunately, neither ARS nor any other research and development organization (public or private) has adequate facilities to conduct the necessary scale-up research to develop and demonstrate the technical and economic feasibility of mass rearing these new biologically-based pest control agents. Without new facilities to conduct research on technology scale-up and pilot scale production for field testing, augmentative biological control can not effectively advance.

Question. How many jobs will the proposed new facility bring to the Mississippi Delta?

Answer. An ARS planning document developed cooperatively by the Midsouth Area Office and the National Program Staff estimated that the proposed National Augmentative Biological Control Laboratory at the Jamie Whitten Delta States Research Center in Stoneville, Mississippi, would need to be staffed by 65 to 70 employees.

Question. Who are the expected customers of the output of this facility?

Answer. Direct customers of this facility, may include agricultural producers interested in managing insect and weed pests in a number of different crop, commodity and rangeland/pasture situations, private companies interested in the production of biological control agents, USDA, APHIS and FS who are interested in using augmentative biological control agents to control pests of agriculture and forestry, and other federal and state land managers who are interested in non-pesticidal methods to control insect and weed pests. Other possible indirect customers include research and development personnel interested in new mass production technologies, private agricultural consultants that may recommend the use of these new biologically-based pest control technologies, and the general public that are expected to benefit through the reduced use of chemical pesticides.

Question. What is industry's role now in biological control of pests and what is it expected to be in the future?

Answer. Currently, the biological control industry is in a fledgling state as it relates to the commercialization of biologically-based technology for large-scale pest control. Although some major industrial groups such as Ciba-Geigy have invested in this industry through subsidiary companies such as Ciba-Bunting, the majority of companies are small, family owned and operated businesses that exploit small niche markets rather than large-scale agricultural production markets. ARS feels that the primary bottleneck in using this technology for commercial agriculture is the development of scale-up mass rearing technology and other supporting research that can only be accomplished in a pilot production facility as is being proposed at the Stoneville location. Through research and development activities at this facility, ARS believes that large and small businesses alike can be assisted through Cooperative Research and Development Agreements and joint patents to further develop and commercialize new biologically-based pest control alternatives for major agricultural commodities and production systems.

QUESTIONS SUBMITTED BY SENATOR BUMPERS

HUMAN NUTRITION

Question. Would you offer your views of why the Human Nutrition research initiative is important?

Answer. The human nutrition research initiative is important because it will provide information to (1) better define the relationship between diet, genetic inheritance, and lifestyle and the risk for chronic disease such as obesity, diabetes, ischemic heart disease, and cancer; (2) improve the resistance to acute infections and immune disorders by investigating the interaction between nutrition and immune function; (3) enhance the capacity to promote changes in dietary habits by basic research on neural processes, memory and learning, appetite regulation, and physiological factors influencing food habits; (4) improve the scientific basis for more effective Federal food assistance programs by better defining nutrient requirements and monitoring food and nutrient consumption and identifying socio-economic, cultural, and environmental forces that influence eating habits; (5) extend dietary guidance to nutritionally-vulnerable groups within the U.S. by determining how food consumption at critical points in the life cycle affects normal development and risk of disease; (6) generate a more nutritious food supply by defining the basis for modifying the health promoting properties of plant and animal foods, and making beneficial changes in the composition of foods.

Specific benefits of the Human Nutrition Research Initiative will include: 1) a delineation of the roles of phytonutrients, e.g., beneficial substances found in fruits, vegetables and grains—in preventing chronic diseases such as cancer, cataracts, and heart disease; in maintaining healthy body weight to avoid diabetes and other diseases; in the role of nutrition in brain function and the resistance to mental decline; 2) determination of factors assuring good bone growth and the protection from osteoporosis; and 3) identification of foods that help in the fight against infectious diseases. The Initiative also provides for a supplemental survey on the food consumption patterns of infants and children so that the Environmental Protection Agency can be provided with the statistically valid sample size for estimating the pesticide residue intakes of children as required by the Food Quality Protection Act.

Question. In what ways will this initiative be applicable to production agriculture?

Answer. Knowledge about health-promoting foods and components of foods can be used by animal, plant, soil, and post-harvest scientists to develop methods to modify food composition both during production and processing, expand food choices, and provide more options for healthful diets. Plant foods have over 600 phytochemicals that have antioxidant, immune-stimulating, sex hormone-modifying, and detoxifica-

tion properties. Human nutrition research is needed to determine which of these phytochemicals can prevent disease associated with aging such as cancer, cataracts, and heart disease, and enhance the ability to resist infectious disease.

Knowledge from human nutrition research indicates that a group of chemicals known as carotenoids, which have antioxidant and immune stimulating properties, help prevent specific diseases such as cancer. This knowledge has been a stimulus for researchers in plant genetics and breeding to significantly increase carotene availability in the food supply. Through genetic research, the total carotene content in tomatoes, sweet potatoes, corn, carrots, and cantaloupes has been increased. Genetic selection has also yielded germplasm that initiates carotene production in such typically carotene-free vegetables as cauliflower, yams, cucumbers, and potatoes. Similar research is needed to exploit the isoflavonoids and lignans, phytoestrogens found in soybeans, and fiber-rich foods such as flax, rye, and legumes, to help prevent sex hormone-related diseases such as breast and prostate cancer.

Other examples of nutritional input to modify food consumption include the production of meat with less fat and the development of grains with more healthful fatty acid profiles and with increased content of health promoting vitamins and minerals.

Nutrition research results can counteract some of the claimed negative attributes for some nutritious foods such as meat, milk, and eggs which have affected the market for these products.

AQUACULTURE

Question. Would you provide your views about the future of aquaculture generally and in terms of activities at Stuttgart and Pine Bluff, Arkansas?

Answer. Aquaculture is poised to become a major growth industry of the 21st century. With increasing seafood demand and declining capture fisheries, global aquaculture production will have to increase some 500 percent by the year 2025 to meet projected needs. Although the United States is the world's largest exporter of seafood, the annual U.S. trade deficit in fisheries products has been \$4.5 billion to \$7 billion since 1987. This trade deficit is the largest for any agricultural commodity. The expansion of domestic aquaculture could help offset this deficit and reduce pressure on threatened capture fisheries. Led by catfish farming, U.S. aquaculture has expanded steadily in the 1980's and 1990's. Production increased from 308.4 million pounds in 1980 to 665.6 million pounds in 1994, while farm-gate value increased from \$260.8 million to \$751.1 million during the same period.

Aquaculture accounts for approximately 181,000 jobs in the U.S. with a total economic impact estimated at \$5.6 billion annually.

Despite recent growth, the U.S. presently ranks only tenth in the world in the value of its aquaculture production and many sectors of the U.S. aquaculture industry are challenged to compete in the global marketplace. Other nations, including China, Japan, Thailand, the Philippines, and Norway, have made aquaculture a national priority with substantial government investments in research and development. Farm-raised seafood from foreign nations is capturing a growing share of the U.S. seafood market. The U.S. has an important opportunity to develop an aquaculture industry to serve national needs and the global marketplace with high quality, safe, and wholesome aquaculture products.

The continued growth and competitive position of the U.S. aquaculture industry in a global marketplace will be directly related to the resources invested in research and technology development. A strong ARS aquaculture research and technology development program offers significant benefits to both producers and consumers of aquatic products by enhancing the production efficiency and quality of aquatic organisms cultivated for both food and non-food purposes.

ARS aquaculture research at Stuttgart and Pine Bluff, Arkansas, contributes substantially to the Agency's national aquaculture research program. Research at Stuttgart is aimed toward improving production efficiency, health management, product quality, and value of a variety of important U.S. aquaculture species. ARS research at Pine Bluff, carried out in cooperation with the University of Arkansas at Pine Bluff, focuses on development and evaluation of new or alternative components of aquaculture systems to improve production efficiency and quality of freshwater fish.

RICE GERmplasm LAB

Question. What plans does USDA have to bring the rice germplasm lab into full operation?

Answer. The National Rice Germplasm Evaluation and Enhancement center has been designed and planned to include an expansion of existing research efforts to include new programmatic thrusts as follow:

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Molecular Genetics.—To apply modern techniques of molecular marking of rice genes to keep pace with technologies being developed in the Japanese Rice Genome Project.

Cereal Chemistry.—To focus upon basic factors affecting traditional long grain rice quality, especially sensory factors of taste and aroma and to help develop aromatic rice varieties for U.S. production. Ten percent of current U.S. consumption is aromatic rice from Asia. There is also a need to develop medium grain varieties suited to the Japanese market.

Molecular Plant Pathology.—To utilize modern biological tools to incorporate diverse resistance in improved varieties. Major diseases include sheath blight, blast, and a new fusarium-type disease.

Molecular Cytogenetics.—To transfer useful genetic characteristics, such as disease resistance and improved quality from 20 species of wild relatives of rice and apomixis, which allow cloning of plants through seeds for production of true breeding hybrids.

Plant Physiology.—To determine basic factors affecting yields and raise the present yield ceiling. The goal is to bring high yielding traits into new varieties, while maintaining desirable grain quality.

Question. What will the operational cost requirements be in the short term?

Answer. The operational cost for the new facility is estimated at \$8 per square foot. This translates to an annual cost for this 46,000 sq. ft. facility of \$368,000.

Question. What are the long term goals for the lab?

Answer. The long-term goal is to conduct germplasm based research directed of the needs at the U.S. rice industry; high yields, superior grain quality, and pest resistance. In order to keep the U.S. industry competitive in the world marketplace, we need to be at the forefront in the development of new technology.

ARS FACILITY CLOSURES

Background

The prepared statement of Secretary Woteki states that ARS is moving ahead with the Strategic Planning Task Force, mandated by the 1996 Farm Bill to determine which, if any, ARS facilities should be closed. Still, the fiscal year 1998 budget proposes to close four facilities next year.

Question. Why did you not wait until completion of your Task Force review to make the decisions to close facilities?

Answer. The question of which programs and locations to maintain and which ones to phase out involved many complex issues. Although the ARS budget has grown gradually over the last 20 years, in real terms there has been little if any growth. Because of inflation, the rising costs of high technology scientific equipment, unfunded increases in personnel costs, and the expense of maintaining an aging infrastructure ARS has seen its scientific work force shrink from 3,400 to 1,900 scientists. In addition, new programmatic demands are constantly being made on the agency as the high priority needs of American agriculture change. In this tight budget environment, the agency has to constantly reevaluate what it is doing and what it needs to be doing. That process makes us identify and discontinue areas of good and useful research that are deemed to be of lower priority at the present time. Where several projects at a given location are terminated, it impacts on the agencies's ability to maintain that location. In such situations the cost of keeping a location open cannot be borne by the remaining programs. Regarding Prosser and Mandan, those projects that are to be retained will be moved to other suitable locations. The facility closures contained in the President's fiscal year 1998 budget are driven by programmatic and budgetary considerations and not by issues related primarily to the facilities themselves.

Question. Did you not think that Congress should have the benefit of your Task Force recommendations before acting on your request to close facilities?

Answer. The Strategic Planning Task Force will explore a host of issues over the next several years regarding ARS and other federally funded research facilities before it submits its recommendations to Congress and the Department. We anticipate that Congress, USDA, and the Land Grant University system will all benefit from the work of this task force. But in the interim, we will have to continue working within the limits of the resources available to us as we adjust and redirect over research program to address emerging problems and initiatives established by the Administration, the Department, and by Congress.

UPDATE ON ARS ITEMS

Question. Would you provide me an update on the following ARS items: Endophyte research at the University of Arkansas and the University of Missouri.

Answer. Endophyte research at the University of Arkansas and the University of Missouri is continuing as follows:

At the University of Arkansas (Fayetteville), ARS is providing funding for cooperative research on reducing the effects of tall fescue toxicosis through development of persistent nontoxic populations of tall fescue, identifying the toxins, identifying beef cattle with genetic tolerance of the toxins, determining the effect of toxins on reproduction in cattle, and development of grazing management to minimize the effects of the toxins.

At the University of Missouri (Columbia), ARS is providing funding for cooperative research on effective management practices to enhance tall fescue field persistence and to determine methods to reduce the effects of tall fescue-fungal endophyte toxicosis. Funding will continue at the current level to the fullest extent possible for the Center of Excellence in Endophyte/Grass Research at the University of Missouri and the University of Arkansas. Endophyte Grass (Univ. of MO/AR): Fiscal year 1996 gross, \$200,000; fiscal year 1997 gross, \$198,400; and fiscal year 1998 gross, \$198,400.

Extramural Agreements with University of Missouri (\$81,456) and University of Arkansas (\$80,152) in fiscal year 1997.

Question. Would you provide me an update on the following ARS items: Lower Mississippi Delta Nutrition Intervention Project.

Answer. This nutrition project is a fully participatory consortium of seven diverse partners organized to address the problems and needs of the population of the Lower Mississippi Delta. The seven partners are: Alcorn State University, Arkansas Children's Hospital Research Institute, Pennington Biomedical Research Center, Southern University and A&M College, University of Arkansas at Pine Bluff, University of Southern Mississippi, and the Agricultural Research Service (USDA/ARS). An electronic communication system among the partners (including electronic mail, fax, and video conferencing) was implemented and is in regular use. The consortium is publishing a monograph of existing data relative to the nutritional status and health of people in the Delta of Arkansas, Louisiana, and Mississippi. Advisory Groups have been established in each State. A pilot/validation study of food consumption and food security was developed. All partners participated in three capacity building workshops focused on nutritional and dietary assessment methods, community assessment methods, and nutrition intervention methodology. Thirty-six counties (10 in Arkansas, 12 in Louisiana, 14 in Mississippi) have been selected for the research based on rates of unemployment, population, and percent of population below the poverty level. A key informant survey has been piloted and the main survey will be implemented in the 36 counties in May/June, 1997. With direction from a USDA Scientific Review Board, a pilot/validation study to determine the feasibility of using telephone interview methodology to obtain food consumption and food security data will be underway during the summer of 1997. This information will be used as baseline data to evaluate the impact of welfare reform in the area at a later time. Other research protocols are being developed including a community assessment survey and a longitudinal study of nutritional status of select segments of the population.

NATIONAL CENTER FOR AGRICULTURAL LAW RESEARCH AND INFORMATION

Question. Would you provide me an update on the following ARS items:

The National Center for Agricultural Law Research and Information.

Answer. The National Agricultural Library (NAL) administers funding for the National Center for Agricultural Law Research and Information (NCALRI) through a grant to the University of Arkansas School of Law. NAL assists NCALRI in the dissemination of information on agricultural law; operation of the Center's information programs; training of Center staff; implementation of compatible cataloging and indexing methods; and addition of the Center's records to NAL's AGRICOLA database and online catalog.

The NAL home page on the Internet provides a link to the NCALRI home page, and NCALRI links to the USDA home page. Potential users may identify NCALRI publications using INFOLINKS, the University of Arkansas online library catalog, NAL's AGRICOLA database and ISIS online catalog, and catalogs of other libraries. Users may obtain many of these publications through interlibrary loan departments at the NAL, the University of Arkansas Mullins Library, and other libraries. Order information for many NCALRI publications is provided on the NCALRI home page.

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QUESTION SUBMITTED BY SENATOR HARKIN

I have reviewed the draft strategic plan for the Agricultural Research Service and applaud the effort expended in developing this document. I am concerned about the measurement of performance mainly on the basis of peer-reviewed journals articles. We all want excellent science from our national labs, but we also want science that is relevant to the problems faced by farmers in the field. Producers want answers to critical problems of agricultural production.

Question. How will you incorporate the needs of producers for answers to specific problems such as wheat/barley scab, the need for new crops, insect infestations and the need for increasing yield of crops and livestock into your strategic plan? What specific measurements in addition to scientific articles, will you employ to ensure that you are meeting yield goals? pest resistance goals? environmental goals? food safety goals? development of new product goals?

Answer. Let me stress that we have a long history of working closely with our customers to determine their research needs. Our customers range from USDA action and regulatory agencies, other Federal and State agencies, commodity groups, processors, farmers, ranchers, to scientists around the world. We try to track "emerging problems" (diseases, weeds, insects, pathogens, and so forth) before they begin to affect American agriculture. In the case of Karnal bunt for example, our scientists followed its movement northward through Mexico and, before it infected American wheat fields, were searching for ways to control and eradicate the fungi. In addition, we were already searching world-wide for Karnal bunt resistant wheat that might become the bases for a long-term solution to this problem. We respond with similar speed and vigor to any threat that could jeopardize the safety and security of U.S. agricultural production systems

Before we started to draft the ARS strategic plan, we held five regional visioning conferences specifically to obtain input from our customers on what they saw as the future needs of American agriculture. When we begin or renew a research project, conduct a program review at a research location or center, or establish a new National Program we involve customers in the process to ensure that our research is relevant to their needs. In part as a result of our customer outreach efforts, all of the issues you noted in your question, yields, environmental protection, food safety, and pest resistance, are covered in the ARS strategic plan.

QUESTIONS SUBMITTED BY SENATOR KOHL

Recently I wrote you with questions regarding the ARS commitment to the new Integrated Farming Systems program initiated by the agency, and funded by Congress, in fiscal year 1997. I greatly appreciated your prompt written response to my questions, which has been very helpful in clarifying some of my concerns. However, a few of your written responses raise additional questions, which I would like to have clarified for the record. Specifically,

Question. In your letter, you state that the \$1 million provided in fiscal year 1997 for the IFS program has been "institutionalized into ARS' base research program on IFS which agency-wide is proposed to total \$7,517,800 in fiscal year 1998." Could you please provide me with an accounting of the full \$7,517,800 request. Specifically, what activities does ARS intend to conduct with this funding, and where would these activities take place?

Answer. The ARS base funding for Integrated Farming Systems (IFS) research is currently at \$7,597,800 and is proposed to become \$7,517,800 in fiscal year 1998. The focus of integrated farming systems research is two-fold: 1) Develop farming systems that are sustainable, economically viable and environmentally friendly; and 2) Provide management decision aid and information systems that enable farmers and their consultants to evaluate alternatives, both strategically and tactically, so that they may make informed decisions about farming operations in the context of a large number of variables.

The following ARS locations are conducting research relative to the development of farming systems: Athens, GA; Ames, IA; St. Paul, MN; Columbia, MO; Oxford, MS; Lincoln, NE; Columbus, OH; University Park, PA; Florence, SC; and Madison, WI.

The following ARS locations are conducting research on decision aid and information systems: Tucson, AZ; Ft. Collins, CO; Morris, MN; and Madison, WI.

Question. Last year, it had been my impression that the IFS program, as described in the fiscal year 1997 budget request, was a new program. Now, I am getting the impression that the agency is viewing the IFS program as an ongoing program that existed prior to fiscal year 1997. Could you clarify any confusion with regard to this matter?

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Answer. IFS is a designation for a new research emphasis rather than for a new program of research. As a result of a presidential initiative in 1990, ARS and other federal agencies embarked upon an agricultural water quality initiative, one aim of which was the same as focus number 1 above. The first seven locations conducting research on farming systems are also involved in the USDA Water Quality Program where a systems approach is being taken to create harmony between agriculture and the environment. Concurrently, other ARS units were developing models, expert systems, and other types of decision assistance tools to help farmers make complex decisions about their farm operations. Those units are included in the second part of the above list.

Several years ago, the U.S. scientific community realized the benefits of a systems approach, and scientists began characterizing some of their work as being oriented towards IFS. ARS began unofficially recognizing and tracking IFS about three years ago. In fiscal year 1997, however, a first attempt has been made at an official designation and tracking of this area of research. In common with the rest of the scientific community, ARS has not come to a final decision about establishing boundaries around what is to be called IFS research. Such boundaries are usually indistinct. The list of locations given above may change in the future.

QUESTIONS SUBMITTED BY SENATOR BYRD

NATIONAL CENTER FOR COOL AND COLD WATER AQUACULTURE

Question. Please detail the progress in developing the National Center for Cool and Cold Water Aquaculture.

Answer. A detailed progress report follows:

- Senate Report No. 101–468, 1991, directed ARS to report on the feasibility for establishing a National Fresh Water Aquaculture Research Center (subsequently named the National Center for Cool and Cold Water Aquaculture [NCCCWA]) in Appalachia. ARS submitted the report in March 1991.
- Senate Report 102–116, 1992, directed ARS to report on the program and site requirements for the NCCCWA. The report was submitted in March, 1992.
- Senate Report 103–102, 1994 directed ARS to proceed with the environmental assessment required to make final recommendations on a suitable site for the NCCCWA. A report was submitted in June 1993. Since then an additional site in Leetown, WV, was identified. An environmental assessment for that site is underway.
- ARS received \$1.9 million in fiscal year 1995 for land purchase and laboratory planning and design. ARS received \$6 million in fiscal year 1997 for construction of the NCCCWA. An additional \$6 million will be required for construction.
- ARS held a program planning workshop in March 1996 to define the research program and criteria for laboratory site and facilities needs.
- Through a September 1996 Memorandum Of Understanding, ARS will co-locate the NCCCWA with the U.S. Department of the Interior's (USDI) Leetown, WV, Science Center. This site, already federally owned, will enable ARS to develop a cooperative program with the USDI Fish Health Laboratory at Leetown, WV, and to share ARS administrative overhead with the ARS Appalachian Fruit Research Station, Kearneysville, West Virginia, within a mile of the Leetown site.
- In December 1996, ARS selected an A-E firm to carry out the design for the NCCCWA. The design is expected to be completed by September 1998.
- ARS is presently negotiating for the purchase of a 215-acre farm adjacent to the Leetown site, to provide for additional watershed protection.
- The projected research program will require a modern laboratory complex, comprising approximately 30,000 square feet, with 12 scientists, and require an annual operating budget of approximately \$4 million. No funds have yet been appropriated for the research program.
- A staffed research facility to address cool and cold water aquaculture production problems could be operational as early as the year 2000.

Question. While the center is under construction, what actions will the USDA take to expand cool and cold water aquaculture opportunities in the state? Through the land-grant university research, extension, and higher education system? Through the Freshwater Institute at Shepherdstown, West Virginia?

Answer. While the National Center for Cool and Cold Water Aquaculture (NCCCWA) is under construction, the Agricultural Research Service (ARS) will continue its ongoing cool and cold water aquaculture research programs through the ARS Appalachian Fruit Research Laboratory, Kearneysville, WV. ARS has conducted an in-house research program in cooperation to develop means to remove

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with the Freshwater Institute in Shepherdstown, West Virginia, wastes and dissolved nutrients from the water used for aquaculture before it is returned to streams or rivers. The water used in this research comes from the intensive culture research tanks of the Freshwater Institute.

Most of the ARS research has been focused on removing the nutrients through the technique of thin-film hydroponics, and using the nutrients to grow commercially valuable crops such as lettuce, sweet basil, strawberries, and turf grass. Research also has been done on artificial wetlands, that efficiently remove nutrients, but do not produce commercially valuable crops.

ARS has recognized the strong potential for cooperation in aquaculture with the University of West Virginia, and has had preliminary discussions with the University to identify opportunities for collaborative aquaculture research and technology transfer programs while the NCCCWA is under development and after it has been constructed.

As soon as program funding for the NCCCWA has been appropriated, ARS will initiate hiring of aquaculture scientists so that research programs can be undertaken, even before the NCCCWA is constructed. The Leetown Science Center has offered the use of research facilities and space during the interim period.

FRESHWATER INSTITUTE

Question. Please provide an update on the programs being carried out through your cooperative research arrangement with the Freshwater Institute. Detail the specific research projects and problems currently being addressed.

Answer. Through a cooperative research arrangement with the Freshwater Institute, ARS has provided funds to the Freshwater Institute to support a portion of its research program on aquaculture in Appalachia. The research problems to be studied have been developed jointly by ARS and the Freshwater Institute, and the research proposals have been developed by the Freshwater Institute.

The cooperative research arrangement between ARS and the Freshwater Institute is consolidated under a cooperative program entitled, "Development of Aquacultural Systems for Appalachia," and has resulted in two highly productive, ongoing research projects. The first project is "Water Quality Control in Intensive Recycle/Reuse Aquaculture Production Systems." This project is focusing on developing new or improved technologies for intensive recycle/reuse aquaculture systems, including modifications to and evaluations of fluidized sand-bed filter design, application of ozone with low-head oxygenator technology, new carbon dioxide control techniques, waste feed detection technology, control of bacterial and nodular gill disease, economic modeling, and quality control. The second project is "Arctic Char: Development of Production Technologies Suited to Water Resources in Appalachia." This project is identifying, studying, and addressing the constraints to Arctic char egg, fry, and fingerling production using the water resources of Appalachia. Arctic char production is new and rapidly expanding in the aquaculture industry of the northern hemisphere, but there is a very limited research base to support domestic production in the U.S. Research from this project will develop and evaluate optimal production technologies and engineered systems that will be required for producing Arctic char seedstock.

Question. What progress and/or accomplishments have been achieved through this cooperative research arrangement? What are the funding levels provided for these efforts in fiscal year 1997 and 1998?

Answer. Noteworthy recent progress and accomplishments for the programs carried out through our cooperative research arrangements with the Freshwater Institute are as follows: Scientists at the Freshwater Institute have developed an improved ultrasonic waste feed monitor through a cooperative arrangement with the University of Mississippi's National Center for Physical Acoustics. This device efficiently detects waste feed, while ignoring fecal material, and represents an improvement over earlier technology developed by these scientists. The device is currently being commercialized through a computer company. Arctic char were successfully hatched and reared to the fry/fingerling stage in recirculating systems conditions. Hatching success was from 95 to 97 percent and post-hatch survivorship was from 80 to 90 percent. This is an important accomplishment for this difficult-to-culture species.

Funding levels provided for the cooperative research program with the Freshwater Institute are estimated at \$1,447,200 in both fiscal year 1997 and fiscal year 1998.

APPALACHIAN SOIL AND WATER CONSERVATION RESEARCH LABORATORY

Question. Please describe research being conducted for agroforestry.

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Answer. The agroforestry research conducted by ARS is focused on increasing income to small family farms in forested Appalachia and the mid-South, where rainfall is abundant but intensive agriculture can occupy only a small proportion of the land because of steep slopes and infertile and shallow soils. Agroforestry has been highly successful in other parts of the world, but it has not been widely adapted to our economy and environment, or to the kinds of small-farm enterprises common in the eastern U.S. The basic objective is to develop diversified and value-added production systems, including crops and/or livestock, which provide income during the 25 to 30 years required for growth of merchantable trees. In part, this involves the planting of genetically improved trees which provide products other than lumber, such as nuts, but spaced so that forages, niche-market or specialty crops like herbs, or other marketable crops can be produced between and beneath the trees. This research identifies compatible tree and understory species, develops integrated pest and weed management practices, and provides efficient management of inputs such as fertilizer. In addition, the research provides basic knowledge concerning the ways desirable trees and understory plants interact, either competing with each other or synergistically promoting greater growth by sharing the sun's energy, water, and nutrients, so that more efficient systems can be designed and evaluated. The integration of livestock, such as cattle, sheep and goats, into this land-use is also studied. ARS research is focused more on management of crops and livestock components than on forestry issues. The U.S. Forest Service is also involved in agroforestry research through its Agroforestry Center in Lincoln, Nebraska. ARS scientists maintain close ties with the Agroforestry Center through communications, cooperation and collaborations. The ARS unit in Booneville, Arkansas has both a Memorandum of Understanding (MOU) and a interagency agreement (IAG) with the Forest Service unit in Pineville, Louisiana regarding tree growth research and data. The ARS unit in Beckley, West Virginia although not a formal participant in the MOU and IAG, is knowledgeable of these activities and also utilizes this information. The ARS agroforestry program also explores ways that trees, shrub, and grass plantings can be used in soil and water conservation efforts, to stabilize streambanks, stop erosion, and improve water quality by capturing runoff water and sediment.

Question. Please advise the committee of the potential of the agroforestry industry in stimulating economic development in the Appalachian region and describe research progress being made in this area.

Answer. Twenty-eight percent of Appalachia's approximately 197,000 square miles is currently in agricultural production. Of this, the dominant agricultural enterprise is livestock grazing by beef cattle and sheep, although production of poultry, swine, dairy, fruit and vegetable, and tobacco are also important. The typical Appalachian farm is less than 150 acres in size, includes one or more hilly wooded acres, and requires off-farm income for economic survival. Agroforestry systems, which allow production of two or more complementary crops on the same land base, have the potential for diversifying and increasing total income on such farms. One example of an agroforestry system is forage production within black walnut plantations. Research at the University of Missouri has demonstrated a 5-fold increase in value over a 20-year period on a black walnut/forage system versus on a similar acreage used for forage alone. In this example, the largest increase in value was from annual nut production income, although under this tree species forage production also remained high. Additional value was accrued as a future high-value veneer harvest. Research is needed to develop sacomparable agroforestry systems for Appalachia. These systems should emphasize species-diverse, sustainable production and include high-value specialty crops and products that provide raw materials for novel, value-added rural enterprises. The Appalachian Region's proximity to major eastern population centers provides access to markets for such niche products. Research to develop agroforestry systems specifically suited to Appalachia was initiated at the Appalachian Soil and Water Conservation Research Laboratory in Beckley, West Virginia. In fiscal year 1993, funds were appropriated for agroforestry research at Beckley, West Virginia. In fiscal year 1995, funds were appropriated to purchase land and initiate a program on agroforestry at Beckley, West Virginia. One area of emphasis includes adding tree components to existing grazing enterprises; a second new area examines production of high-value understory crops in managed woodlots. Anticipated benefits from this research include; 1) diversifying and improving the economic status of small, hill-land farms; 2) development of innovative production systems which are sustainable and ecologically compatible with the region; 3) increasing the provision of raw materials to supply small, locally owned, value-added enterprises; and 4) making a positive contribution to the survival of small rural communities.

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At Beckley, black walnut and honey locust were planted in experimental spacings with various forage species on instrumented watersheds, on a very steep hillside with varying soil depth, typical of the region, for studies of productivity, water requirements, and nutrient cycling. Improved strains of black walnut, honey locust, and other trees with potential value for multiple-use plantings were selected and planted for evaluation within forage production systems. A modeling effort has begun on partitioning of solar radiation, water, and nutrients between trees and understory for use as a tool to generalize research findings for a wide range of production conditions found in Appalachia. The objective is to find the most efficient and cost effective plant established strategies. Other work being implemented in this new program addresses the use of desirable trees in the management of new varieties of chestnut and hazelnut which produce high-carbohydrate nuts very soon after planting, as an early source of income.

Agroforestry research began at Booneville, Arkansas, in fiscal year 1992. There, ARS scientists developed the practice of harvesting the plentiful supplies of pine straw for sale to homeowners and landscapers as mulch. This provides cash flow averaging about \$440.00 per acre annually, while pine plantings mature. ARS scientists at Booneville have demonstrated that various forages can be produced profitably within timber plantations of various spacings, and are defining the optimum numbers of trees and orientation of tree rows for maximizing production of forage in the tree understory. Working with cooperators from universities and other Federal agencies, Booneville scientists are adapting the New Zealand Forest Research Initiative's Agroforestry Estate Model to U.S. conditions and requirements. This model is a decision aid which provides yields and profits for any specific situation. It is being evaluated in the field by agroforestry cooperators across the U.S. Booneville scientists and their cooperators at Langston University in Oklahoma also demonstrated that goats can be used profitably and effectively in place of herbicides to clear the vegetation from land to control weeds and shrubs that would compete with tree seedlings.

Question. Please identify additional program and resource requirements to enhance the productivity of this facility. Specifically, please provide the committee with an analysis on constructed biosystems for disturbed hill lands.

Answer. The Appalachian region is experiencing the following activities that potentially threaten its natural resources. Accelerated harvesting of forests for chips and pulp and continued extraction of minerals are creating an increasing number of disturbed sites. Because of low population density, Appalachia is being targeted by surrounding regions as a site for disposal of wastes. Industrial activities such as coal power plant production in the Appalachian region are also creating large quantities of by-products requiring disposal. A program focusing on constructed biosystems for disturbed hill lands would benefit Appalachia by developing management strategies for these activities.

The constructed biosystems program would focus on research in which best management practices are developed for the integration of animal, industrial, and municipal by-products in the development of nontraditional agricultural with the selection of new plant materials systems. The goals are to improve disturbed areas, develop new agricultural enterprise and promote rural economic development. Projected benefits include: new environmentally sound technologies for management of disturbed lands; maintained or improved environmental quality and enhanced standard of living; and opportunities for cooperation with industry and other Federal and State agencies.

Question. Please describe research being done regarding the utilization of coal combustion by-products, which are generated abundantly in West Virginia, as a means of managing acidic hill-land soils for improved growth of forage and crop plants.

Answer. Plant growth on acidic soils is limited by the deficit in both magnesium and calcium. Coal combustion by-products from the flue gas desulfurization process pose a disposal problem, but contain significant amounts of calcium. A Cooperative Research and Development Agreement (CRADA) has been developed between ARS scientists at Beckley, WV, and Dravo Lime Company of Pittsburgh, PA, to produce a magnesium enhanced local combustion and gypsum by-product. This now patented by-product improved yields of forage and row crop species in acid soils. Other research has shown that some coal combustion by-products are of concern because trace elements, such as boron, may accumulate in plants. Research has shown, however, that plants showed no excessive accumulation of heavy metals. Gypsum enhanced by-products have also been shown to raise subsoil pH and improve root growth. Another approach under investigation is combining coal combustion by-products with animal manures to create a nutrient source and acidic soil conditioner.

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Fluidized bed combustion residue along with polyacrylamide also reduced erosion on tilled hillsides. This coal combustion by-product combined at a moderate rate with phosphate rock and dolomitic lime improved phosphorus, calcium and magnesium levels in infertile acid soils while reducing levels of phytotoxic aluminum.

Question. Please identify the department's current research efforts, including funding and scientific support of each project at the Appalachian Soil and Water Conservation Laboratory.

Answer. The fiscal year 1997 funding and scientific support for each project at the Appalachian Soil and Water Conservation Laboratory are shown below:

Project title	Scientists	Funding
Potentials for Agroforestry	1.6	\$396,900
Alleviation of Acid Soil Constraints to Plant Growth	2.5	1,006,200
Selection and Improvement of Plants for Infertile Acid Soils	3.5	912,100
Livestock Grazing Systems and Water Quality in Appalachia	2.5	744,700
Management and Ecology of Pastures in the Appalachian Region	2.5	763,800
Forage Legume Breeding for the Appalachian Region	1.4	400,200
Total	14.0	4,223,900

Question. Please provide significant accomplishments attributed to each project.

Answer. Potentials for Agroforestry—The use of black locust, honey locust and black walnut within forage pastures appears to be beneficial. The trees provide shade for the livestock and their seed pods are a good source of nutrients for the livestock. The growth of shade tolerant forage species among the trees also may allow the pastures to be grazed for a longer time during the summer.

Alleviation of Acid Soil Constraints to Plant Growth—The application of a coal combustion power plant residue, a flue gas desulfurization (FGD) by-product, to an Appalachian acid soil resulted in increased crop yields. This gypsum quality by-product was effective in raising calcium levels and reducing phytotoxic soil aluminum concentrations. When this by-product was combined with phosphate rock and dolomitic lime, improved soil phosphorus and magnesium levels and higher soil pH also resulted. The development of this combined product is being pursued through a Cooperative Agreement and Development Act (CRADA) activity. The FGD by-product combined with polyacrylamide was also shown to reduce soil erosion from tilled hillsides.

Selection and Improvement of Plants for Infertile Acid Soils—Poor plant growth in acid soils is most often caused by excessive aluminum adsorption by plant roots. This toxic effect of aluminum on plants is dependent upon the form or species of aluminum in soil, which in turn is dependent upon the other minerals present in a soil. The form or species of aluminum in acid soils toxic to plants has been re-evaluated based on new information. These data were used to develop a mathematical model that describes the interaction between aluminum and other soil minerals that can relieve the aluminum toxicity. This model also describes the adsorption of aluminum and other minerals by plant root membranes. It can be used to predict the likely toxicity of various acid soils to plants. Not only do soils differ in their toxicity, but plants and varieties of plants differ in their tolerance to acid soil toxicity. The Alfagraze alfalfa variety was shown to be more tolerant and thus produce higher yields than the Vernal variety at a soil pH of 4.6.

Livestock Grazing Systems and Water Quality in Appalachia—Grazing studies in the Beckley area show that a balance of fiber, energy, and protein improves nitrogen (N) use efficiency in grazing livestock. If fiber energy and protein are in proper balance, less N will be excreted and the reduction in manure nitrogen will improve the quality of water leaving the watershed. A predictive energy model for grasses has been developed that will help managers decide how to stock or utilize a pasture to meet the energy demands of livestock. Water resource management practices, grazing techniques, and pasture management strategies were tested and shown to improve and preserve water quality in highly agriculturalized karst landscapes.

Management and Ecology of Pastures in the Appalachian Region—Different types of plants are being evaluated for use in Appalachia to lead to improved production efficiency. The composition of new and nontraditional plants is being examined as is the potential for production of bioactive compounds that may serve as herbivore deterrents. Some grasses infected with a beneficial mycorrhizal fungal symbiont were shown to have improved nutrient uptake ability and enhanced competitive ability, important features for low-input pasture systems in Appalachia.

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Forage Legume Breeding for the Appalachian Region—The capability of legumes, such as clover and alfalfa, to fix atmospheric nitrogen in combination with a bacterial rhizobia symbiont and; thus, help the plant meet its requirement for this major nutrient as well as their digestibility makes legumes highly desirable forage plants. Unfortunately, most legumes are sensitive to acid soils. White clover cultivars currently used in Appalachia were found to be less acid soil resistant than those available from New Zealand and elsewhere. These more resistant cultivars are now being used to develop white clover varieties more suitable to Appalachian soils and conditions.

APPALACHIAN FRUIT RESEARCH STATION

Question. Please identify the department's research projects being carried out by the Appalachian Fruit Research Station and identify the funding and scientific support for each.

Answer. There are twelve base funded research projects at the Appalachian Fruit Research Station in Kearneysville, West Virginia. The individual projects, funding and scientific support for each project are provided for the record.

Molecular Biology and Genetic Engineering of Fruit Trees—\$835,500, 2.8 scientist years.

Genetics and Cultivar Development of Pear and Peach—\$536,000, 1.5 scientist years.

Cold Hardiness and Stress Adaptation in Fruit Trees—\$271,500, 1.0 scientist years.

Related Costs for Apple Research—\$201,300. In consultation with industry these funds have been redirected to high priority research on assessment of apple quality (\$100,000 to East Lansing, Michigan) and in support of apple rootstock breeding and development (\$100,000 to Geneva, New York).

Biological Management of Deciduous Tree Fruit Insect Pests—\$371,100, 1.7 scientist years.

Utilization of Waste & Byproducts from Aquaculture to Enhance Economic . . . Sustainability—\$482,800, 1.4 scientist years.

Mechanization for Deciduous Tree Fruits and Small Fruits—\$301,200, 1.2 scientist years.

Vegetation and Soil Management in Fruit Production—\$568,200, 2.2 scientist years.

Improved Deciduous Tree Fruit Product, Efficiency and Fruit Quality Through Integrated Cultural Management—\$606,200, 1.7 scientist years.

Deciduous Fruit Crop Diseases—\$438,700, 2.0 scientist years.

Nondestructive Sensors Measuring the Postharvest Quality of Apples—\$415,000, 1.1 scientist years.

Development of Aquacultural Systems for Appalachia—\$1,302,700, extramural project.

Question. Please provide the accomplishments made by the station in developing naturally based products that can be used by the fruit industry as alternatives to pesticide control of post-harvest rotting.

Answer. A significant discovery has been made in pest and disease control with the observation that a naturally occurring hydrophobic clay material when applied to foliage will greatly reduce the severity of insect attack and severity of disease on susceptible fruit trees.

Question. Significant losses are occurring each year in the production of peaches due to plant stress. Please advise the committee of the progress being made by the Appalachian Fruit Research Station in identifying stress-resistant genes which would enhance peach quality and production.

Answer. ARS scientists at the Appalachian Fruit Research Laboratory in Kearneysville, West Virginia have identified genes that may provide resistance to plant stress in peaches, specifically freezing stress. A gene has been isolated from peach tree bark that encodes a protein known as a "dehydrin." Similar proteins have been identified from other plants, and they seem to protect plant cells against damage from freezing and drying. In peaches, either drought or fall dormancy caused the dehydrin to accumulate, and the amount in a tissue closely followed the degree of cold hardiness. This long-term research, when combined with other research underway at the laboratory, is expected to lead to more frost-tolerant peach trees.

Question. Please identify recent research accomplishments by the Appalachian Fruit Research Station of significance to the fruit industry.

Answer.

Molecular Biology and Genetic Engineering of Fruit Trees.—Transgenic plums showing immunity to plum pox virus were obtained via genetic engineering.

Genetic and Cultivar Development of Pear and Peach.—Genes for resistance to viral and bacterial diseases that have devastating economic impact on grape production each year were transferred into “Thompson Seedless” grapes by genetic engineering. The same gene transfer techniques are being used to develop pear and peach cultivars resistant to viral and bacterial diseases.

Cold Hardiness and Stress Adaptation in Fruit.—A gene encoding a “cryoprotective” protein was isolated from peach bark; manipulation of the expression of this gene could potentially decrease current tree fruit losses due to cold temperatures and expand the range of temperate tree fruits.

Related Costs for Apple Research.—Nine specific cooperative agreements were initiated with university researchers to address problems of fruit storage and pesticide reduction.

Utilization of Waste and Byproducts from Aquaculture to Enhance Economic and Environmental Sustainability.—Hydroponic plant production cleaned aquaculture wastewater to water quality standards equal to the original water in the spring source. Hydroponic plant production of lettuce, strawberry, and basil also generated a gross additional gross income of \$4/ft of greenhouse area while removing a waste product.

Mechanization for Deciduous Tree Fruits and Small Fruits.—In 1995, a mechanical harvester for fresh market blueberries was developed, tested, and licensed to a Michigan firm. This same harvesting concept was used to build a mechanical harvester for processing citrus. The citrus harvester was built, tested, and shown to be highly effective in removing various citrus fruits without damage to fruit, tree, or developing fruit. A unique trellis system for eastern thornless blackberries was developed that separates fruiting canes from vegetative canes. This trellis system together with the mechanical blackberry harvester are able to harvest fresh-market quality blackberries.

Vegetation and Soil Management in Fruit Production.—A tensiometer irrigation valve was designed, tested, and patented in 1993. In 1995, a cooperative research and development agreement was in place with a Virginia company to commercialize this invention. The tensiometer valve senses the water content of the soil and opens an irrigation valve when the soil needs water and closes the valve when wet. It operates without electricity and only one moving part. It will have application in horticulture greenhouses, landscape settings, nurseries, and home gardens. Inert and non-toxic hydrophobic particles reduced disease incidence and repelled major insect pests of apple and pear.

These reflective particles also reduced water stress. A cooperative research and development agreement is being negotiated to commercialize this broad spectrum, non-toxic pest control product.

Improved Deciduous Tree Fruit Production Efficiency and Fruit Quality Through Integrated Cultural Management.—Selected ground cover systems or a new plant growth regulator reduced vegetative growth in apple trees and the number of shoots exhibiting fire blight symptoms. These findings could lead to improved fruit productivity and reduced tree losses from fire blight, a major problem in the Appalachian Region.

Nondestructive Sensors Measuring the Postharvest Quality of Apples.—A prototype on-line system that non-destructively measures apple quality has been developed and is being evaluated in cooperation with an industry partner.

Water Quality Control In Intensive Recycle/Reuse Aquaculture Production Systems.—Results of a field trial of the ultrasonic waste feed controller (UWFC) showed that satiation feeding with the UWFC or by hand produced the same feed conversion and 30–50 percent faster growth than ration feeding produced. A tagging experiment showed that growth of rainbow trout stocked at 8–12 cm (within a mixed cohort system) and harvested at 340 g was not strongly dependent upon initial length. Adding ozone to the water within a recirculating system was found to improve microscreen filtration, water quality, and reduce bacterial gill disease problems.

Question. Please identify additional program and resource requirements to enhance the productivity of this facility.

Answer. Pest and disease control is the single greatest cost in fruit production. The impact and productivity of the Kearneysville research group would be enhanced by strengthening the following areas of research. (1) Identify, characterize and implement the development and utilization of natural compounds and microorganisms as biocontrol agents in preventing or suppressing diseases and pests in pre- and post-harvest crop production. (2) Expand activities in biotechnology and the application of genetic engineering technologies in the development of transgenic plants with improved product quality and resistance to pests and diseases. (3) Investigate

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pesticide degradation and movement in orchard soils under various ground cover management systems to reduce ground water contamination.

QUESTIONS SUBMITTED BY SENATOR LEAHY

FOODBORNE ILLNESSES

Question. Under the draft research agenda for the Office of Food Safety and Inspection Services, there are a number of recommendations for food borne illnesses in humans. What research is the Agriculture Department currently conducting to address this issue and what level of funding would be necessary to implement the recommendations for further research?

Answer. The Agriculture Department is not addressing those questions from the draft research agenda of the Food Safety and Inspection Service which relate to food borne illness in humans, that is, such questions relating to the epidemiology and incidence of human disease related to food borne pathogens, and the sensitivity of specific human populations to these pathogens. The minimum funding necessary to implement these recommendations for further research would be \$10 million.

ASIAN LONG-HORNED BEETLE

Question. Without immediate attention, spread of the Asian Long-Horned beetle into forested areas of New York, Vermont and Massachusetts could threaten the important maple sugar and fall foliage industries of the northeast. Has the Agriculture Department proposed a research program to investigate and develop potential control mechanisms for this pest?

Answer. Currently, the State Departments of Agriculture are attempting to eradicate this insect pest by felling, chopping up, and burning trees in which the beetle has been found. For example, contractors hired by New York State started cutting down the first of up to about 50 trees in February of 1997, from backyards and streets in infested communities. New York plans to replace the trees with varieties the beetle doesn't eat and conduct periodic surveys to see if the insect is in other locales. Other states that may become infested could use similar tactics. USDA will add \$500,000 to efforts in New York to replace trees being removed and destroyed because of the beetle. The state and city will each expend \$1 million. USDA Animal and Plant Health Inspection Service and Forest Service have requested that the public contact them if they suspect an infestation in their area. USDA Animal and Plant Health Inspection Service (APHIS) and Forest Service have also requested that ARS determine what natural enemies might exist in the pest's native habitats of Japan, Korea and Southern China through its European Biological Control Laboratory in Montpellier, France. Cornell University scientists are also studying the situation. No large scale research effort has been formulated as yet.

Question. What level of funding is necessary to undertake such a research project?

Answer. If the pest cannot be prevented from spreading and eradicated, then a research project that would include studies on the biology and ecology of the pest, as well as development of effective IPM tactics, should be initiated. Such a project should be funded at a minimum of \$600,000.

Question. Would the Department include and/or delegate the project to a university research program?

Answer. The Department would include appropriate university research scientists as partners in addressing this pest.

Question. Will some of the \$2.5 million requested increase in support of emerging disease and exotic pests be used to address the Asian Long-Horned beetle?

Answer. ARS has requested a \$5,000,000 increase to address emerging diseases and exotic pests in fiscal year 1998. Of the \$5,000,000 requested, ARS plans to allocate \$2,500,000 for studies on emerging plant diseases, \$1,100,000 for studies on emerging exotic diseases of livestock, and \$1,400,000 for studies on emerging domestic and zoonotic diseases of livestock. ARS has not planned to use these funds for research on the Asian longhorn beetle.

Question. Outside of the U.S. Forest Service, please list the research projects being conducted by the Department on forestry issues.

Answer. ARS does not conduct forestry research per se. ARS does, however, conduct some research that can be related to forestry issues as follows: Agroforestry Systems for the Family Farm—Booneville, AR; Potentials for Agroforestry—Beckley, WV; Systematics of Flies of Importance in Biocontrol, Agricultural Crops, and Forests—Beltsville, MD; Genetic Improvement of Trees for Soil and Water—Mandan, ND; Genetics and Germplasm Evaluation of Landscape Woody Plants—Washington, D.C.; The Development of Pest-Resistant Landscape Trees to Enhance Environment

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and Reduce Use of Pesticides—Washington, D.C.; Development of Sustainable Urban Agro-Systems and Biocontrol Strategies for Gypsy Moth and Turf Pests—Beltsville, MD. Agroforestry is a land-use system that attempts to optimize the benefits from the interactions created when trees and/or shrubs are deliberately combined with crops and/or livestock. ARS agroforestry research is focused more on the crop and livestock components than on trees and shrubs. Less directly, but still potentially related to forestry, is ARS' research on trees for windbreaks, arboretums, and horticultural applications. Some of the research findings on genetics, diseases, and biocontrol may be applicable to forestry issues. Colleges of Agriculture at many land grant and other universities include Forestry Departments and; therefore, CSREES conducts research on forestry related issues. Individual researchers in ARS cooperate with CSREES scientists on specific topics related to tree and forestry issues, but ARS is not in a position to address the CSREES forestry research program.

Question. The President's budget request includes an increase of \$1 million to support the Grazing Lands Initiative. What will this additional funding be used for? How will the funding be dispersed? Are there research projects proposed for specific regions?

Answer. The increase of \$1 million to support grazing lands research will be utilized to strengthen the ARS rangeland and pasture research program in the areas of utilization and natural resource conservation. This funding will be directed to the ARS laboratories at El Reno, Oklahoma (\$400,000) and University Park, Pennsylvania (\$300,000) for research to determine the impact of pasture design and grazing animals on the quality of water emerging from watersheds, and to develop pasture management systems that will optimize water quality and pasture productivity. In addition, \$300,000 will be directed to ARS research at Las Cruces, New Mexico, to develop low-input technology for seeding native grasses and shrubs on degraded rangelands and riparian areas. Current methods of reseeding rangeland require mechanical seedbed preparation, which is costly and encourages erosion. Methods of distribution of seed which do not disturb soils or require expensive equipment include overland water flow during rainfall events, wind dispersal, and distribution by cattle themselves after passing through the digestive tract.

Question. The President's request includes an increase of \$2.5 million for research in support of emerging exotic diseases in livestock. The focus of this increase is on limiting the introduction of exotic disease. What activities has the Department undertaken to develop a tracking system for livestock to address the spread of disease once it has been introduced?

Answer. The ARS animal health research program develops diagnostic tests and vaccines for monitoring or tracking livestock disease. ARS works closely with APHIS and producer groups to use new diagnostic tests to track spread of disease. This type of research has been particularly important recently in detecting new domestic strains of bovine viral diarrhea and porcine reproductive respiratory syndrome.

OZONE STANDARDS

Question. In response to the U.S. Environmental Protection Agency's proposed tighter ozone and fine particulate standards, agriculture groups have asserted that the new standards would have a detrimental impact on farm operations. Has the Department undertaken any research projects to assess these claims?

Answer. ARS is pursuing an aggressive research program to assist U.S. farmers in meeting air quality standards, but is not doing research on claims that new air quality standards would adversely affect farm operations.

INTEGRATED PEST MANAGEMENT

Question. How much funding is the Department directing towards Integrated Pest Management and environmentally-friendly techniques?

Answer. The information on the funding for Integrated Pest Management and related programs by USDA agencies is provided for the record.

<i>Agency</i>	<i>Fiscal year 1997</i>
AMS	\$2,556,000
APHIS	34,493,000
ARS	75,612,000
CSREES:RES	58,441,000
CSREES:EXT	13,997,000
ERS	2,500,000
FS	16,117,000
NASS	5,700,000

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<i>Agency</i>	<i>Fiscal year 1997</i>
NRCS	6,617,000
Total	216,033,000

Question. What is the status of the USDA goal to have 75 percent of U.S. agriculture using IPM?

Answer. Upon the commencement of USDA's Integrated Pest Management (IPM) initiative in 1994, the Department's Economic Research Service estimated that American farmers have adopted IPM methods on nearly half of all fruit and nut, vegetable, and major field crop acreage. Total land used for crops in the United States is estimated at 332 million acres. The level of use of IPM practices depends on the crop, the region and the pest problem. The National Agricultural Statistical Service is currently conducting national surveys of major field crops, and selected fruits and vegetables to ascertain levels of IPM adoption and chemical use. The results of the first of these surveys will be available in early 1998. Much more work is needed to refine and implement a sound measurement methodology. After the Economic Research Service (ERS) report was published in 1994, additional studies have been completed by Department analysts and outside experts, and most support ERS' conclusion that 50 percent or more of the nation's crop acreage is currently managed under at least a "low" level of IPM. However, several analyses, including the one published by Consumers Union in *Pest Management* at the Crossroads, have concluded that considerable more work is needed to help producers move along the IPM continuum to the "medium" and "high" levels. We believe that an accelerated effort is needed, and warranted, to help growers reduce reliance on high-risk pesticides and enhance the sustainability of farm operations.

Question. What research activities are being undertaken to help farmers reach this goal?

Answer. A variety of interagency partnership research activities are being undertaken to provide the necessary components for adoption by farmers into an integrated pest management systems approach. Practices and methods being developed vary among crops and among different regions of the country. For example, in some regions, the introduction of parasites or predators, which naturally prey on particular pests are being developed for introduction into infested areas. In other areas, crop rotation and planting date tactics, resistant crop varieties, and cultural practices are being developed for use in combination with other methods, such as microbial biocontrol, mating disruption, and sterile insect technology, to manage pests before they reach damaging levels. The pests that are targeted by these studies include insects and mites, plant pathogens and nematodes, and weeds. The control tactics may be used in greenhouse, on crop acreage, and in urban gardening settings.

Under the USDA IPM initiative all the activities of the agencies and the land-grant system State Agricultural Experiment Stations have been pulled together into a coordinated effort that is more efficient and more effective in getting new knowledge and technology resulting from the research activities into the hands of the farmers. The priority needs identified by state and regional IPM teams are being used to orient area-wide IPM programs conducted by the Agricultural Research Service, IPM research conducted at State Exp. Stations and Extension IPM programs. All of these activities are being directed to meet the educational needs of farmers and their advisors for IPM adoption.

Question. What research activities is USDA undertaking to develop alternatives to comply with the Food Quality Protection Act?

Answer. The USDA recognizes the critical need to develop alternatives as the Food Quality Protection Act is implemented and needs for pest management alternatives are identified. The USDA IPM Initiative is a critical activity for addressing pest management needs identified by farmers and others through a comprehensive needs identification and priority process involving every state. A number of major research and education programs are currently underway to develop and deliver alternative management methods to producers as increasing broad restrictions on pesticide use and continuing development of pest resistance occur. For example, the ARS area-wide IPM program, in partnership with CSREES and the land-grant university system, other state and federal agencies, and the private sector are undertaking research on sustainable systems including biological, cultural and other biorational technologies. CSREES provides funds to support mission-linked research that is focused on biological control, host resistance, cultural control and applied ecology, and management of resistance. CSREES also supports IPM education and training programs needed to transfer pest control alternatives to farmers, crop consultants, and other IPM end-users via Cooperative Extension Service programs in every state. The Food Quality Protection Act includes language requiring the Sec-

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retary of Agriculture to ensure support for minor-use pesticide research. ARS and CSREES in partnership with the Land Grant Universities carry out research under the IR-4 program which supports the use of registered pesticides and biological control agents for minor crops where there are no economic incentives to do so by private industry. Regulatory action prompted by the Food Quality Protection Act has increased the burden on this program in terms of alternative control materials compatible with IPM systems.

PEAR THRIPS RESEARCH

Question. The fiscal year 1997 Senate Agriculture Appropriations report provides \$78,000 for Pear Thrips research in Vermont and includes the following report language: "ARS application of project funds for overhead expenses are not to exceed 10 percent of the amount appropriated for the project." How much of the original \$78,000 award has ARS directly granted to the research institution? Please provide a breakdown of how the balance of the \$78,000 award has been used by ARS.

Answer. The fiscal year 1997 funding level for pear thrips research in the northeastern U.S. is \$80,300. Of the \$80,300 provided to ARS, \$45,000 is provided under a cooperative agreement to the University of Vermont. The emphasis of the Vermont program has been to use entomopathogenic fungi to control pear thrips in sugar maple plantations. The remaining \$35,300 is allocated to Ithaca, NY to directly support activities conducted by the pear thrips program in Vermont and has included the cryogenic storage of fungal pathogen isolates important to the program, the taxonomic identification of collected isolates, molecular systematics research on associated fungal pathogen species, assistance with fungal pathogen isolation and culturing techniques, and other similar support services.

QUESTION SUBMITTED SENATOR FAIRCLOTH

PROJECT TERMINATION

Question. The White House budget proposal eliminates 71 Agricultural Research positions. I just learned that the Agriculture Department contacted some of those researchers and, in essence, directed them to accept new posts. I understand that the Department told these researchers that a failure to accept the new posts will result in possible unemployment if Congress fails to restore their current positions in the appropriations process. I am informed, in fact, that several of these researchers were told that reluctance to accept the new posts will jeopardize their careers. I am thus concerned that some of these scientists construed these job "offers" as an effort to ensure that their current posts are vacated prior to congressional action on the budget and possible restoration of these positions (these researchers were told that these posts will not be left open through the fiscal year). However, if these people accept the new positions, they will be unavailable to return to their current posts if Congress opts to restore funds for the positions. Their decisions will appear voluntary, but, as you know, these circumstances paint a rather different situation. As you know, these decisions are the province of the Congress, and it appears that the Department is in the midst of an effort to undermine the congressional prerogative. How does the Department justify these actions?

Answer. The proposed fiscal year 1998 budget for ARS identifies 71 research projects to be terminated to help fund several new research initiatives. New positions associated with the new research initiatives will be established that will offset those positions associated with projects that will be terminating. In addition, there are a number of available unencumbered positions currently in the Agency as a normal process of attrition. Managing the transition from positions associated with project terminations to new or existing positions poses many challenges. There is no provision for an orderly transition because we will not know what the content of our fiscal year 1998 budget will be until final legislative and executive approvals occur, usually in September. We are very sensitive to the effect these actions are having on the specific projects and personnel involved. We are making every attempt to plan for the reassignment of these impacted employees to other available positions. To the greatest extent feasible, we are attempting to coincide the timing of the relocation of our researchers with the beginning of the 1998 fiscal year so that in those situations where Congress restores projects, those decisions can be reversed. No employee was told that their job would be in jeopardy. Whether an employee voluntarily elects to transfer to another position in the Agency is independent of the Agency's commitment to maintaining a given project. As long as appropriated funds are in the ARS budget for the project, however, ARS is obligated to maintain the program. If placement within the local area is not possible, we will be offering

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reassignments to vacant positions at other ARS locations to all permanent employees. For those who are unable to relocate, we will provide counseling and assistance in finding jobs in the local area. Unfortunately, this uncertainty and inability to develop definitive plans presents many dilemmas for our impacted employees from a personal perspective. Most of them will not know what ultimately will happen to them until final action is taken on the budget.

QUESTIONS SUBMITTED BY SENATOR GRASSLEY

BIOFUELS

Question. How has your relationship with the Department of Energy progressed during the past year with regard to biofuels? What new areas are being researched in science and economics? What are the Department's plans for this coming year to increase cooperation with DOE on biofuels? What is the status of the Memorandum of Understanding?

Answer. During the past year ARS has had 2 workshops with DOE and its laboratories. The areas covered were fuel ethanol research and biodiesel research. The participants also set up a joint steering committee to plan for future coordination at the research level, began sharing materials, and agreed to implement a scientist exchange. DOE's National Renewable Energy Laboratory (NREL) has provided their new biomass fermenting organism to 2 ARS Research Centers, both of which are concerned with applying that technology to making ethanol from corn biomass. The steering committee will also facilitate sharing plans.

ARS also has a CRADA with NREL and the Fats and Protein Research Foundation to examine the use of biodiesel feedstocks such as animal fats and restaurant grease, enzymatic hydrolysis, and using branched chain alcohols as biodiesel fuel.

Question. Has the Department designated a single person to coordinate ethanol, and separately biodiesel, research Department-wide? Who is that person? If not, why has the Department chosen that course of action?

Answer. The Associate Deputy Administrator for Crop Production, Product Value, and Safety coordinates ethanol and biodiesel research for ARS. The Director, ERS-Office of Energy and New Uses has responsibility for the Department.

BIOFUELS

Question. Will the Office of Energy receive the same amount of funding as last year, or has the Department asked for increased funding? Does the Office of Energy still have the ability to contract out for special studies? How much money has been allocated for this purpose? If not, why has the Department curtailed funding and activity in this area?

Answer. In fiscal year 1996, the Office of Energy and New Uses was funded for \$849,000. In fiscal year 1997, the estimated funding is \$499,000. The Office, as a part of ERS, does have the authority to contract out for special studies. Thirteen thousand has been allocated for nonsalary expenses. Funding has been reduced in this area for two reasons: First, ERS is moving and must pay some of the moving expenses out of its nonsalary expenses. Second, the budget allocation process was redesigned by me to establish a central, flexible pool of funds from the Agency's nonsalary expenses to be allocated by collective management decisions, rather than portioning out the entire Agency allocation to ERS divisions and office at the start of the year.

Question. Will the Department maintain, at least, level funding for ethanol research at ARS and CSREES? If not, why not?

Answer. ARS proposes level funding for ethanol research at \$5.2 million. CSREES estimates a decline from a current estimate of \$2.9 in fiscal year 1997 to \$1.8 in fiscal year 1998 due to reductions proposed for special research grants.

Question. Has the Department assisted the biodiesel industry in their efforts to achieve alternative fuel status in Department of Energy regulations? In what way? Will the Department increase these efforts? If needed, will the Department support changes in EPACT favorable to biodiesel?

Answer. ARS has and continues to foster biodiesel development from the early 1980's to its present programs in fiscal year 1997. Specific research that has been conducted includes the following: feedstocks, e.g., soy oil, tallow, recycled greases and soap stocks; fuel quality assessment to demonstrate that biodiesel and blends of biodiesel (B20) are energy equivalent to petrodiesel, substantially similar (sub sim) regulations; and engine testing as well as emission testing of neat biodiesel and B20. ARS plans to maintain its current level of effort on this issue. DOE is the lead agency determining implementation of EPACT rules and regulations. USDA is pre-

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pared to provide whatever information it has to DOE on the net benefits of biodiesel to facilitate its use. If the changes considered in EPACT are legislative, then an Administration position would need to be developed depending upon the nature of the change.

Question. What USDA agencies are involved in value added research? What is the proposed budget for new uses? How does this differ from the previous budget request?

Answer. The USDA agencies involved in value added research and their proposed budgets for new uses are follows:

[Dollars in thousands]

Agency	Fiscal year—	
	1997 funds	1998 funds
Agricultural Research Service	\$82,368	\$76,326
Alt. Agric. Research and Comm. Corp	7,000	10,000
Cooperative State Research, Education, and Extension Service	28,701	18,885
Economic Research Service	1,274	1,274
Forest Service	9,482	9,482
Office of Operations	49	51
Total	128,874	116,018

The fiscal year 1998 budget for USDA reflects a decrease of \$12.9M in new uses research.

OFFICE OF ENERGY AND NEW USES BIOFUELS FUNCTION

Question. Will the Office of Energy be capable of fulfilling its function of advocating for biofuels under this budget request?

Answer. The Office of Energy and New Uses is responsible for assisting the Secretary in developing departmental energy policy and coordinating departmental energy programs and strategies. Secretary Glickman has made clear that he has a policy of encouraging the development of an agriculturally-based biofuels industry. The Office will continue to support the policy position of the Secretary of Agriculture under the current budget request.

QUESTIONS SUBMITTED BY SENATOR DORGAN

PROJECT TERMINATION

In its evaluation of research projects, ARS used a subjective point system to screen which projects to consider and subsequently recommend for termination. The data collected through this subjective review has not been made available to Congress. In fact, Congress has been told that the data developed through this screening process has been destroyed because it was part of a “pre-decision” review. Congress must have such information available not only to determine the effectiveness of the screening process, but also to consider whether ARS priorities are consistent with the public policy objectives established by Congress.

Question. Since the screening process was an essential component of determining which projects would be considered for termination, what is the purpose of withholding this data from Congressional review as it considers budget and research priorities for USDA?

Answer. Our intent was not to withhold information; the initial ratings of research projects based on the ARS Project Evaluation Guide were only the first step in the process to identify projects for proposed termination. All projects that fell into the lower quartile were further scrutinized and evaluated by the ARS top management team. This collection of information which included the consensus scores plus the scientific and programmatic knowledge and experience of the ARS management team, was then used to select those projects that were judged to be less critical to agriculture from a national perspective at this point in time, in relation to all other research ongoing in the Agency. The initial data, without the benefit of the followup analysis, debate, and judgmental inputs that occurred to develop the final list of proposed project terminations could be misinterpreted and therefore be potentially detrimental to those individual employees and programs implicated.

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The original project scores were not conscientiously destroyed but simply were not retained in computer files after they had served their purpose in the initial part of the overall evaluation process.

The 1996 farm law established a "Strategic Planning Task Force" which was given the responsibility of reviewing "all currently operating agricultural research facilities constructed in whole or in part with Federal funds," as well as proposed future research facilities. These facilities were to be reviewed in the context of the development of a ten-year strategic plan which reflects "both national and regional perspectives for development, modernization, construction, consolidation, and closure of Federal agricultural research facilities."

The fiscal year 1998 recommendation by ARS to close four research facilities, does not in my view give equal consideration to the importance of research from both national and regional perspectives. The ARS fiscal year 1998 budget proposal precludes the "Strategic Planning Task Force" from considering these four facilities in its review, thereby prejudging the outcome of this process.

Question. Based on the 1996 farm law directive, would it not be more appropriate for ARS to postpone any facility closures until the Strategic Planning Task Force is able to consider all currently operating agricultural research facilities from both national and regional perspectives and make its recommendations to the Secretary and Congress?

Answer. The Federal Agriculture Improvement Act of 1996 established a Strategic Planning Task Force to explore a host of issues, over the next several years, regarding ARS and other Federally funded research facilities. It will be approximately two years before the task force submits its recommendations to Congress and the Department. We hope that Congress, USDA, ARS, and the Land Grant University system will all benefit from the work of this task force. But in the interim, we will have to continue working within the limits of the resources available to adjust and redirect our research program to address emerging problems and new initiatives established by the Administration, the Department, and by Congress.

The question of which programs and locations to maintain and which ones to phase out involved many complex issues. Although the ARS budget has increased gradually over the last 20 years, in real terms there has been little if any growth. In addition, new programmatic demands are constantly being made on the agency as the high priority needs of American agriculture change. In this tight budget environment, the agency has to constantly reevaluate what it is doing and what it needs to be doing. That process makes us identify and discontinue areas of research that are deemed to be less critical at the present time. One of the factors we keep in mind when making these decisions is our desire to maintain research capabilities in all regions of the country. The facility closures contained in the President's fiscal year 1998 budget are driven by programmatic and budgetary considerations and not by issues related primarily to the facilities themselves.

There appears to be a shift in emphasis within USDA away from basic production-related agricultural research. Currently, production agriculture is being called upon to be more environmentally sensitive and sustainable, while also being internationally competitive. In order to achieve these objectives, basic production research needs to pay particular attention to the specific regional ecosystems in which farmers and ranchers operate.

Question. To what extent were these objectives particularly as they relate to regional ecosystems considered in the project evaluation process by USDA in its recommendation to terminate 71 projects and four ARS facilities and specifically, the Mandan, North Dakota ARS facility?

Answer. ARS research priorities continue to reflect the sustainability, environmental harmony and international competitiveness aspects of production agriculture. The process used by ARS to evaluate research projects included a consideration of similar research being conducted elsewhere in the Agency that would have applicability to those regions or areas where research projects would be terminated. For example, the three projects proposed for termination at Mandan focus on water management systems, soil management, and forage germplasm. Similar research on water management is being conducted at ARS locations in Akron, Colorado; Sidney, Montana; and Bushland, Texas. Research related to soil management is conducted at Lubbock, Temple, and Weslaco, Texas; and Morris, Minnesota, and research to improve forage germplasm is carried out at ARS in Lincoln, Nebraska, and Logan, Utah. ARS researchers at these locations have the capacity to extend and apply their work on a broad regional basis to include the Northern Great Plains.

USDA is in the process of terminating ARS projects and facilities, as well as embarking upon a study of research capacity through the Strategic Planning Task Force. At the same time funds from prior appropriations and other sources have

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been set aside or held in reserve for the modernization, expansion, refurbishing, etc. of ARS offices and facilities.

Question. Please identify the amount of funding which is being held by USDA for such purposes, the sources of such funding, and the ARS facilities for which such funding is being held. Also, please distinguish between the funding held for administrative offices and laboratory facilities.

Answer. The agency is currently holding in reserve a total of \$25,480,000 of prior appropriations to the Buildings and Facilities account. These amounts are being held until sufficient funds are accumulated for a design or construction contract award. Full funding of a design or construction project is required before a contract can be awarded. Of the total, \$3,065,000 is being held for the modernization efforts at the National Center for Agricultural Utilization Research, Peoria, Illinois (\$1,545,000) and U.S. Grain Marketing Research Laboratory, Manhattan, Kansas (\$1,520,000). The remaining \$22,415,000 is being held for construction of the following replacement laboratories: U.S. Horticultural Crop and Water Management Laboratory, Parlier, California (\$2,630,000); U.S. Vegetable Laboratory, Charleston, South Carolina (\$12,453,000); National Center for Cool and Cold Water Aquaculture, Leetown, West Virginia (\$6,000,000); Poultry Disease Laboratory, Athens, Georgia (\$936,000); and the Water Conservation and Western Cotton Research Laboratory, Maricopa, Arizona (\$396,000). It is not possible to distinguish the agency-held funds by laboratory or office space usage.

	Replacement laboratories	Modernization projects
Parlier, CA	\$2,630,000	.....
Athens, GA	936,000	.....
Charleston, SC	12,453,000	.....
Leetown, WV	6,000,000	.....
Maricopa, AZ	396,000	.....
Peoria, IL .....	.....	\$1,545,000
Manhattan, KS .....	.....	1,520,000
Total	22,415,000	3,065,000

ECONOMIC RESEARCH SERVICE

QUESTIONS SUBMITTED BY SENATOR COCHRAN

TRAVEL

Question. Please provide the Committee with a breakdown of ERS actual travel costs in fiscal year 1996.

Answer. ERS travel costs in fiscal year 1996 were \$1,184,000. Of this amount \$621,000 or percent was paid by ERS appropriations, and \$563,000 or 48 percent was paid from reimbursements from other government agencies. The primary reimbursement source for ERS travel is the Foreign Agricultural Service for technical assistance studies in Eastern Europe.

Question. Please identify foreign travel obligations for fiscal years 1994, 1995, and estimates for fiscal years 1996 and 1997.

Answer. A table that shows travel obligations paid from ERS appropriations and reimbursement funds will be submitted for the record.

[The information follows:]

Economic Research Service Foreign Travel Obligations

<i>Fiscal year</i>	<i>Amount</i>
1994	\$383,000
1995	407,000
1996	607,000
1997 (est.)	700,000

Question. How many ERS personnel were engaged in foreign trips in these years and for what purposes?

Answer. A table that shows the number of ERS personnel engaged in foreign trips will be submitted for the record. The primary purpose of these trips was to provide technical assistance to Former Soviet Union countries and Eastern Europe countries

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to facilitate their transition toward market economies. Commodity outlook and policy analysis training in the form of seminars and hands on experience was provided.

ERS travel to Eastern Europe and the FSU has been part of a program to provide technical assistance to help develop and institutionalize the capacity to conduct and disseminate market reporting, analysis and forecasting for key agricultural commodities. The funding for these activities came initially from AID (SEED Act), and subsequently from USDA's Emerging Democracies Program. These trips have been very successful. Programs for agricultural market analysis and forecasting now exist as self sustaining programs in Poland, the Czech Republic, and Slovakia, where ERS programs are ending. ERS training in Russia led to the establishment of successful reporting and analysis programs in 20 oblasts, and provided the model for a larger World Bank loan (ARIES) to allow the Russians to spread the system to all oblasts. The transition from technical assistance to a Russian led program was a hallmark of the recent Gore-Chernomyrdin meeting. Programs in Bulgaria, Romania and Ukraine are still ongoing, but have already led to a series of market analysis and forecasting reports which are produced regularly and widely disseminated.

Improved transparency and availability of market information has benefited the US—both public and private sector—as well as the recipient countries. The technical assistance activities have significantly increased the quantity and quality of information available to the United States on these countries' agriculture. The Foreign Agriculture Service has included reports produced by these countries on its website for use by the private sector and other government agencies and organizations. Current market assessments and forecasting of likely future conditions has helped to improve the trade and investment climate and provides private sector with valuable information on which to base its decisions. The countries themselves also benefit. Better information on their markets reduce costly and counter-productive interventions by governments, and has been important to countries in conducting the analysis needed to meet international trade obligations. The trips have also helped develop a network of well-trained economists and market analysts who are able, in turn, to provide additional training in their own countries and in other emerging democracies not covered by the ERS program.

In fiscal year 1997, a group of ERS employees will be participating in the American Agricultural Economics Association meetings in Toronto, Canada.

[The information follows:]

Economic Research Service Personnel Engaged in Foreign Trips

<i>Fiscal year</i>	<i>Personnel</i>
1994	210
1995	305
1996	243
1997 (est.)	313

GPRA INITIATIVE DESCRIPTION

Question. Would you please briefly describe the Administration's initiative to develop performance measures and indicators that can be employed to carry out program assessments mandated by the Government Performance and Results Act. What is the total cost of this initiative in fiscal year 1998 and future years? How much is USDA to contribute in each of these years?

Answer. The initiative "Provide Statistical Expertise for GPRA Measurement" draws upon the expertise of eight federal agencies to develop performance measures and indicators to assist federal government agencies in meeting their GPRA requirements. The overall initiative statement explains a number of reasons for undertaking the activities. Many agencies have been struggling with measurement problems associated with outcome based performance. Consistent concepts, scales, and sampling methods are critical for reliable performance-based comparisons among Departments. Many Federal services contain common dimensions—e.g. courtesy, timeliness, knowledge—that are currently measured on different scales that undermine useful comparisons. Many agencies have asked for help in developing a catalog of tested questions and satisfaction scales. The American Consumer Satisfaction Index is the only nation-wide standardized satisfaction measure that permits consistent comparison of private sector products and services with Federal agency products and services.

The total budget request for the initiative is \$3.55 million and is composed of the following parts: a.—\$1.6 million to develop or refine comparable "turn-key" data collection and measurement resources for use by agencies throughout the Government; b.—\$0.75 million to develop standardized questions and satisfaction scales for common elements of Federal services; and c.—\$1.2 million to add 10 Federal agencies

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to the American Consumer Satisfaction Index. USDA, through the participation of ERS and NASS, is requesting a total of \$665,000.

GPRA INITIATIVE TIME FRAME

Question. Shouldn't government-wide performance measures and indicators be available for agencies to use in the development of their strategic plans, goals and measures? What is the proposed time frame for the development of these statistical measures and indicators?

Answer. Development of measures and indicators is inextricably tied to the goals set. The benefits from the outcome oriented GPRA management approach depends first upon setting the correct goals. Challenges agencies governmentwide face in setting goals include: a.—balancing the relative importance of cost effective outcomes versus effectiveness at any cost; b.—setting goals to obtain outcomes which the agency can definitely control versus broader policy outcomes; and c.—balancing goals relative to customer satisfaction measurement—e.g., responsiveness and courtesy shown to customers—with basic goals for the program—e.g., retiring most environmentally sensitive lands at the lowest cost to U.S. taxpayers. Setting simplistic quantity goals for people served and answers provided may undermine the quality of the service and the answers. The choice of goals must define the measures and indicators used rather than allow the ease of measurement dictate the formulation of the goals. As agencies government-wide make progress in developing their strategic plans and setting goals, the statistical agencies involved in the initiative will be charged with finding what and how common performance measures and indicators can be developed to improve comparisons between different agencies' progress towards similarly defined goals. Identifying commonality in goals across the complex and sometime apparently conflicting array of outcomes sought will not be easy. Work on development of these statistical measures and indicators will begin in fiscal year 1998. Because all agencies will have developed their strategic plans by this time, the GPRA initiative will help agencies to refine and improve their goals and measures. Furthermore, the availability of these strategic plans will greatly assist ERS in identifying common goals in the various plans and allow ERS to focus our efforts.

ERS ROLE IN GPRA INITIATIVE

Question. No staffing increases are proposed. What specifically will be funded with \$125,000 in ERS funding and the \$540,000 in NASS funding requested for fiscal year 1998?

Answer. The additional funding for ERS and NASS would allow ERS to participate regarding performance measurement issues. NASS would be involved in all three phases of the initiative including formulation of sampling plans, development of standard survey instruments and scales, and work with the American Customer Satisfaction Index on development of measures for farm/rural programs and nutrition programs.

OTHER PARTICIPANTS IN GPRA INITIATIVE

Question. Which other six federal statistical agencies will participate in this initiative, in addition to the Economic Research Service and the National Agricultural Statistics Service? Is there a lead agency?

Answer. In addition to ERS and NASS, the other federal agencies participating in this initiative include the Bureau of Labor Statistics, Bureau of Transportation Statistics, Census, Energy Information Agency, National Center for Health Statistics, and the Statistics of Income in the Internal Revenue Service. The Interagency Council on Statistical Policy, chaired by OMB's Chief Statistician, will determine the most cost-effective tasks and division of labor with inputs from the President's Management Council and OMB Resource Management Officer's staff on priority objectives.

QUESTIONS SUBMITTED BY SENATOR GRASSLEY

USDA-DOE BIOFUELS COLLABORATION

Question. How has your relationship with the Department of Energy progressed during the past year with regard to biofuels? What new areas are being researched in science and economics? What are the Department's plans for this coming year to increase cooperation with DOE on biofuels? What is the status of the Memorandum of Understanding?

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Answer. The Department of Agriculture—USDA—has developed a close working relationship with the Department of Energy—DOE—on biofuels activities. For example, during the past year, the Agricultural Research Service—ARS—along with the Economic Research Service's—ERS—Office of Energy and New Uses have had two workshops with DOE and its laboratories to develop collaborative scientific activities. The areas covered were ethanol research and biodiesel research. The participants also set up a joint steering committee to plan for future coordination at the research level, to began sharing materials, and agreed to implement a scientist exchange. DOE's National Renewable Energy Laboratory—NREL—has provided their new biomass fermenting organism to two ARS Research Centers, at Peoria, Illinois and Wyndmoor, Pennsylvania. These labs plan to apply that technology to experiment with making ethanol from corn biomass. The steering committee will also facilitate sharing and coordinating strategic plans. ARS also has a cooperative research and development agreement with NREL and the Fats and Protein Research Foundation to examine the use of biodiesel feedstocks such as animal fats and restaurant grease, the use of enzymatic hydrolysis technology for making biodiesel fuel, and the use of branched chain alcohols as biodiesel fuel.

The Forest Service is collaborating with the Quincy Library Group in California and DOE and its NREL lab to develop a feasibility study that includes ethanol as an option for disposal of wood waste from tree thinning. The Forest Service and DOE are also developing hybrid poplars on conservation reserve land in the north central region for use as an energy source for electric generation. One power company has already contracted with farmers to purchase their wood when it reaches maturity in 6 to 10 years. Oak Ridge and ARS have developed a new switchgrass variety, Shawnee, that combines higher forage value for livestock with high biomass yields. Finally, DOE and USDA cosponsored a request for proposal for a biomass power for rural development project to demonstrate and commercialize new biomass for power technology agencies. As part of the request for proposal, the Rural Utilities Service, Farm Service Agency, and Natural Resource and Conservation Service in USDA offered to use existing programs and authorities to help facilitate this project. Three awards were made in New York, Minnesota, and Iowa in response to the request for proposals.

Ongoing economic research includes a project with DOE and the University of Tennessee to use an agricultural intercommodity model to evaluate how an expanding energy crop market would affect agricultural food and fiber markets and farm income. In addition, USDA is collaborating with DOE to update the net energy balance of corn ethanol and to look at the climate change emission benefits and is also working with DOE's NREL lab to examine the transition economics of moving from a corn-based to a biomass-based ethanol industry. USDA and DOE have nearly completed a life-cycle analysis of biodiesel's net environmental benefits. The next step will be to monetize the benefits in an economic analysis. USDA and DOE are cooperating with the Environmental Protection Agency—EPA—on an analysis of the effects of using oxygenates in gasoline on toxic emissions. USDA, DOE, and EPA are also participating in a benefit-cost analysis of the Oxygenated Fuels Program with the White House Office of Science and Technology Policy. All of these projects are ongoing into the coming year.

ERS and DOE analysts will continue to evaluate the short-run and long-run marketing opportunities for biofuels response to the changing economic and policy environment. The Department will also take a fresh look at existing programs and authorities that could complement DOE biofuels efforts.

The Memorandum of Understanding with DOE on biofuels research lapsed this past January. Nevertheless, USDA and DOE are continuing close coordination and mutual research on biofuels issues as I have discussed.

USDA BIOFUELS COORDINATION

Question. Has the Department designated a single person to coordinate ethanol, and separately biodiesel, research Department-wide? Who is that person? If not, why has the Department chosen that course of action?

Answer. Yes, Dr. Roger Conway, Director of the ERS Office of Energy and New Uses has overall responsibility for coordinating energy and biofuels research for the Department. Most agencies within the Department also have an energy contact person.

OFFICE OF ENERGY AND NEW USES FUNDING

Question. Will the Office of Energy receive the same amount of funding as last year, or has the Department asked for increased funding? Does the Office of Energy still have the ability to contract out for special studies? How much money has been

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allocated for this purpose? If not, why has the Department curtailed funding and activity in this area?

Answer. In fiscal year 1997, the Office of Energy and New Uses has been funded at \$544,000. Of that amount, \$58,000 has been allocated for non-salary expenses that may include contracts for special studies. It is likely that another \$45,000 for non-salary expenses will be allocated to the Office in the last quarter of the fiscal year. Assuming a total \$103,000 of non-salary funds is ultimately available to the Office, it would have a more than proportionate share of such agency resources: with about one percent of the staff, it would claim 10 percent of the agency's non-salary expenses. With the Departmental reorganization, the Office of Energy and New Uses becomes a component of the Economic Research Service, a move that facilitates the ability of the Office to draw on the agency's analytical resources and, indeed, it has. Consequently, the need for non-salary funds to contract for special studies should decrease commensurately. The allocation for fiscal year 1998 has yet to be determined.

ARS AND CSREES ETHANOL FUNDING

Question. Will the Department maintain, at least, level funding for ethanol research at ARS and CSREES? If not, why not?

Answer. ARS proposes level funding for ethanol research at \$5.2 million. CSREES estimates a decline from a current estimate of \$2.9 million in fiscal year 1997 to \$1.8 million in fiscal year 1998. The decline in the fiscal year 1998 estimate reflects the reduced level of funding for Special Research Grants in the CSREES 1998 President's Budget Request.

USDA BIODIESEL SUPPORT

Question. Has the Department assisted the biodiesel industry in their efforts to achieve alternative fuel status in Department of Energy regulations? In what way? Will the Department increase these efforts? If needed, will the Department support changes in EPACT favorable to biodiesel?

Answer. Yes, the Department has assisted the biodiesel industry in its efforts to achieve alternative fuel status in DOE regulations. One hundred percent biodiesel fuel has been accepted by DOE as an alternative fuel. USDA research and economic analysis was used in the industry petition to include biodiesel blends in DOE's EPACT program. USDA is working with DOE on a biodiesel life-cycle analysis to estimate the comparative environmental benefits of biodiesel and biodiesel blends relative to petroleum diesel. A report on using alternative fuels in urban transit buses was cofunded by the biodiesel industry and USDA and published by ERS. This study shows that B20 is cost competitive with other alternative fuels such as natural gas and methanol. An ERS study published in the Industrial Uses of Agricultural Materials, Situation and Outlook Report shows that using B20 in Federal fleets can increase soybean prices and enhance farm income. In addition, USDA has met with DOE on several occasions to discuss the appropriate role of biodiesel in EPACT's alternative-fueled vehicle program. DOE has consistently stated that a biodiesel blend could qualify as an alternative fuel, although the level must be consistent with certain criteria to qualify as an alternative fuel.

The Department also supports biodiesel through its research program to lower production costs of biodiesel fuels. ARS has and will continue to foster biodiesel development in fiscal year 1997. Specific research that has been addressed to feedstocks, e.g. soy oil, tallow, recycled greases and soap stocks; fuel quality assessments to demonstrate that biodiesel and blends of biodiesel—B20—are energy equivalent to petrodiesels, and engine and emission testing of neat biodiesel and B20.

DOE is the lead agency determining implementation of EPACT rules and regulations. USDA is prepared to provide whatever information it has to DOE on the net benefits of biodiesel to facilitate its use. If the changes considered in EPACT are legislative, then an Administration position would be developed depending upon the nature of the change.

USDA NEW USES RESEARCH

Question. What USDA agencies are involved in value added research? What is the proposed budget for new uses? How does this differ from the previous budget request?

Answer. USDA agencies involved in nonfood new uses include the Agricultural Research Service—ARS—the Alternative Agricultural Research and Commercialization Corporation—AARCC—Cooperative State Research, Education, and Extension Service—CSREES—the Economic Research Service—ERS—and the Forest Service—FS. The current total USDA budget estimate for nonfood new uses for fiscal year

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1997 is \$70.2 million, and the proposed fiscal year 1998 budget is \$63.6 million. The decrease is a result of declines in ARS funding from \$40.2 million in fiscal year 1997 to \$36.5 million in fiscal year 1998 and in CSREES from \$13.4 million in fiscal year 1997 to \$7.6 million in fiscal year 1998.

OFFICE OF ENERGY AND NEW USES BIOFUELS FUNCTION

Question. Will the Office of Energy be capable of fulfilling its function of advocating for biofuels under this budget request?

Answer. The Office of Energy and New Uses is responsible for assisting the Secretary in developing departmental energy policy and coordinating departmental energy programs and strategies. Secretary Glickman has made it clear that he has a policy of encouraging the development of an agriculturally-based biofuels industry. The Office will continue to support the policy position of the Secretary of Agriculture under the current budget request.

NATIONAL AGRICULTURAL STATISTICS SERVICE

QUESTIONS SUBMITTED BY SENATOR COCHRAN

GPRA INITIATIVE DESCRIPTION

Question. The fiscal year 1998 request includes increased funding of \$125,000 for the Economic Research Service and \$540,000 for the National Agricultural Statistics Service to participate in an initiative to provide statistical support to Federal agencies in meeting the requirements of the Government Performance and Results Act. Would you please briefly describe the Administration's initiative to develop performance measures and indicators that can be employed to carry out program assessments mandated by the Government Performance and Results Act.

What is the total cost of this initiative in fiscal year 1998 and future years? How much is USDA to contribute in each of these years?

Answer. The initiative, "Provide Statistical Expertise for GPRA Measurement," draws upon the expertise of eight federal statistical agencies to develop performance measures and indicators to assist federal government agencies in meeting GPRA requirements. The overall initiative statement explains a number of reasons for undertaking the activities. Many agencies have been struggling with measurement problems associated with outcome based performance. Consistent concepts, scales, and sampling methods are critical for reliable performance-based comparisons among Departments. Many Federal services contain common dimensions such as courtesy, timeliness, and knowledge that are currently measured on different scales that undermine useful comparisons. Many agencies have asked for help to develop sampling schemes, a catalog of tested questions, and satisfaction scales to obtain reliable results which can be compared across agencies and tracked over time. The American Customer Satisfaction Index is the only nation-wide standardized satisfaction measure that permits consistent comparison of private sector products and services with Federal agency products and services.

The total budget request for the initiative is \$3.55 million and is composed of the following parts: a) \$1.6 million to develop or refine comparable "turn-key" data collection and measurement resources for use by agencies throughout the Government; b) \$0.75 million to develop standardized questions and satisfaction scales for common elements of Federal services; and c) \$1.2 million to add 10 Federal agencies to the American Customer Satisfaction Index. USDA, through the participation of both NASS and ERS, is requesting a total of \$665,000 in fiscal year 1998. Development of sampling plans, questionnaires, and satisfaction scales would require one-time development costs, followed by much lower costs to maintain and refine. Actual measurement tasks would be funded by the sponsoring agencies.

GPRA INITIATIVE TIME FRAME

Question. Shouldn't government-wide performance measures and indicators be available for agencies to use in the development of their strategic plans, goals and measures? What is the proposed time frame for the development of these statistical measures and indicators?

Answer. Development of measures and indicators is inextricably tied to the goals set. The benefits from the outcome-oriented GPRA management approach depends first upon setting the correct goals. Challenges agencies governmentwide face in setting goals include: 1) balancing the relative importance of cost effective outcomes versus effectiveness at any cost; 2) setting goals to obtain outcomes which the agency can definitely control versus broader policy outcomes; and 3) balancing goals rel-

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ative to customer satisfaction measurements, such as responsiveness and courtesy shown to customers with basic goals for the program. Setting simplistic quantity goals for people served and answers provided may undermine the quality of the service and the answers. The choice of goals must define the measures and indicators used rather than have the ease of measurement dictate the formulation of the goals. As agencies government-wide make progress in developing their strategic plans and setting goals, the statistical agencies involved in the initiative will be charged with finding what and how common performance measures and indicators can be developed to improve comparisons between agencies of progress made towards achievement of similar goals. Identifying commonality in goals across the complex and sometime apparently conflicting array of outcomes sought will not be easy. Work on development of these statistical measures and indicators will begin in fiscal year 1998. Because all agencies will have developed strategic plans by this time, the GPRA initiative will be available to help them refine and improve their goals and measures. Furthermore, the availability of these plans will facilitate identification of common goals and measures, allowing NASS to focus its efforts on developing standard instruments and scales that will be useful to many agencies.

NASS ROLE IN GPRA INITIATIVE

Question. No staffing increases are proposed. What specifically will be funded with the \$540,000 in NASS funding requested for fiscal year 1998?

Answer. NASS would be involved in all three phases of the project including formulation of sampling plans, development of standard survey instruments and scales, and work with the American Customer Satisfaction Index on development of measures for farm/rural programs and/or nutrition programs.

OTHER PARTICIPANTS IN GPRA INITIATIVE

Question. Which other six federal statistical agencies will participate in this initiative, in addition to the Economic Research Service and the National Agricultural Statistics Service? Is there a lead agency?

Answer. In addition to ERS and NASS, the other federal agencies participating in this initiative include the Bureau of Labor Statistics, Bureau of Transportation Statistics, Census, Energy Information Agency, National Center for Health Statistics, and the Statistics of Income in the Internal Revenue Service. The Interagency Council on Statistical Policy, chaired by OMB's Chief Statistician, will determine the most cost-effective tasks and division of labor with inputs from the President's Management Council and OMB's Resource Management Office staff on priority objectives.

NASS DATA COLLECTION COSTS

Question. The fiscal year 1998 request includes an additional \$500,000 to cover higher costs for survey interviewers employed under a cooperative agreement with the National Association of State Departments of Agriculture whose salary increases are not covered by Federal pay cost increases, and for increased costs of per diem and mileage. Are these pay cost increases mandated under the cooperative agreement with the National Association of State Departments of Agriculture?

Answer. No, the pay cost increases are not mandated by the agreement with the National Association of State Departments of Agriculture (NASDA). NASDA interviewers are intermittent, part-time employees. It has become extremely difficult in many areas of the country for NASDA to hire and retain enumerators because salaries are generally below local wages for comparable jobs. A failure to adjust salaries and mileage reimbursement of survey interviewers to keep pace with competing employers will result in higher turnover rates, lower morale, and a reduction in the overall quality of the survey work.

Question. How much of the \$500,000 increase requested is for pay cost increases and how much is for per diem and for mileage expenses?

Answer. The total request is actually \$640,000. The request is in two parts: \$500,000 is for increased costs in NASS's regular survey program and an additional \$140,000 is for increased data collection costs associated with the 1997 Census of Agriculture. The \$640,000 breaks down as follows: \$470,000 is for increased pay costs; \$30,000 is for increased per diem costs; and \$140,000 is for increased mileage costs.

TRAVEL

Question. Please provide the Committee with a breakdown of NASS's actual travel costs in fiscal year 1996.

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Answer. Total NASS travel costs in fiscal year 1996, including appropriated and reimbursable travel, were \$1,396,000.

Question. Please identify foreign travel obligations for fiscal years 1994, 1995, and estimates for fiscal years 1996 and 1997.

Answer. Foreign travel costs for fiscal years 1994 through 1997 are as follows:

<i>Fiscal year</i>	
1994	\$73,700
1995	223,400
1996	377,200
1997 (est.)	400,000

Question. How many NASS personnel were engaged in foreign trips in these years and for what purposes?

Answer. The following table shows the number of people and the purpose of the foreign trips for fiscal years 1994–97.

NUMBER OF PEOPLE TAKING FOREIGN TRIPS

Purpose	1994	1995	1996	1997 (est.)
Technical Training and Survey Assistance	29	42	45	40
Workshops, Meetings and Conferences	11	15	4	10

QUESTIONS SUBMITTED BY SENATOR KOHL

CHEESE PRICE SURVEY

Question. NASS recently started conducting a nationwide survey of dairy manufacturing plants to determine the prices being paid for cheese nationally. I applaud the efforts of USDA to move forward with this survey, which I believe will help provide more accurate market information about cheese prices. Accurate market information is an important prerequisite to an efficient pricing system for cheese in the private sector, as well as being important to the overall federal milk pricing reforms that are underway at USDA. However, with any new survey, it takes some time to determine if the data retrieved is reliable and accurate. This is particularly true when the survey is voluntary, as is the case with this cheese price survey. In that regard, I have the following questions. How many dairy plants receive the survey each week?

Answer. NASS contacted 112 plants for the cheddar cheese price survey. These plants accounted for over 99 percent of production. Thirty of the plants screened out of the survey because they had no bulk sales, aged all their cheese, used all production internally, etc. Seven plants refused to participate in the survey and another 12 have not made a final determination.

Question. How many plants are responding?

Answer. The 63 plants reporting price data weekly account for about 80 percent of all bulk, wholesale sales of natural cheddar cheese.

Question. In your view, does the rate of nonparticipation threaten the accuracy of the survey?

Answer. Currently the survey accounts for about 80 percent of qualifying sales, which is a high level of coverage. However, there is no guarantee NASS will be able to maintain this high level of voluntary cooperation. Declining cooperation rates could threaten the accuracy of the series in the future.

Question. Would the survey be more accurate if all the surveyed plants participated?

Answer. Yes, it would be more accurate if all plants participated. This would ensure that the survey would be representative of all sales and produce consistent, statistically valid results. By consistency, we mean it is important for a large portion of the sales to be reported by the same firms every survey period.

Question. Are there other aspects of the survey which raise concerns about the accuracy of the data? For example, are some regions more fully represented in the survey than others, and if so, does that in any way skew the data?

Answer. The plants not participating in the survey are fairly evenly distributed across the country. But NASS has no way to measure the effect the nonreporting plants would have on the cheese prices.

Question. Since industry has traditionally used the price established by the National Cheese Exchange (NCE) each week as a benchmark price for the large major-

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ity of off-exchange bulk cheese sales, is there any attempt being made in the survey to distinguish between forward-contract sales, which are linked to the NCE price, and spot market sales, which may be more independent of the NCE?

Answer. All sales data recorded in the survey are for sales transactions completed during the survey week. Completed transactions generally mean cheese is shipped or title transfers. The possibility of collecting contracted sales was explored when the plants were initially contacted. It did not prove to be feasible to collect contracted sales since prices for the future were not generally established.

FORAGE STATISTICS

Question. As farmers seek to take advantage of new crop insurance programs, dairy farmers in my state have had continuing difficulty with crop insurance on their forage crops, such as alfalfa. In discussing the matter with crop insurance providers in Wisconsin, one of the concerns that has been raised in this regard is related to an inadequacy of NASS data reporting. Specifically, the concern is that payments under Group Risk Plans (GRP) for forage crops are triggered by county average losses as reported by NASS. However, it is my understanding that while NASS calculates and reports figures for county average harvests, you do not report data for losses due to winterkill, which is a predominate form of forage loss for northern-tier states.

In order to make the GRP crop insurance plans work effectively for forage crops, it would seem appropriate for NASS to augment its data retrieval process to show not only forage harvested, but also forage lost to winterkill. Would you be willing to make that change?

Answer. The NASS program for forage is limited to dry hay statistics and includes acres harvested, yield, and production estimates. Since most hay crops are perennial, the acreage planted each year is not the same as the area devoted to hay.

The GRP insurance program was implemented by the Risk Management Agency (RMA) using existing county data series published by NASS. NASS is very concerned that the yield data being used to determine payments under the GRP are not adequate to measure all losses which farmers may incur. The lack of data on forage losses due to winterkill is just one of many examples of the inadequacy of the existing NASS county estimates data series to measure losses due to adverse weather such as drought, flooding, hail, or severe winter temperatures which can cause excessive winterkill.

The GRP insurance program for all crops, including forage, rely on the final average county yield per harvested acre. This means that severely damaged acres not harvested are not accounted for in the final county yield estimates. Also, severe natural disaster losses, such as those caused by hail and flooding, frequently occur in only a portion of any given county. Therefore using the county average statistics provide very limited risk protection for farmers since it requires a significant number of other farms to also incur severe losses.

Forage crops in particular present special challenges. Because of the multiple uses of forage crops, NASS seriously questions whether reliable statistical data could be collected that would accurately measure winterkill and other factors which cause forage acres not to be harvested. For example, in most areas, forage crops can be cut for dry hay, green chop, silage, pastured by livestock, or plowed under for green manure. Also, a certain percentage of forage acres require reseeding every year—would those acres be reported as abandoned acres? Therefore, NASS has never attempted to measure forage acres planted. Finally, the RMA would probably need several years of historical forage data for use in the payment calculations.

ADDITIONAL COMMITTEE QUESTIONS

QUESTIONS SUBMITTED BY SENATOR COCHRAN

Dr. Woteki, you indicate in your prepared testimony that the “returns for all research and development in agriculture are estimated to be 35 percent annually, while those for pre-technology or pre-development research—much of the kind of work funded through the National Research Initiative—are considerably higher.”

RETURNS TO PRE-TECHNOLOGY/PRE-DEVELOPMENT AGRICULTURE RESEARCH

Question. What are the returns for pre-technology or pre-development agricultural research?

Answer. Although there have been many studies that provide estimates of the rate of return to public agricultural research, few provide estimates for pre-tech-

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nology and applied research separately. An important exception is a landmark study by Wallace E. Huffman and Robert E. Evenson—professors of economics at Iowa State University and Yale University, respectively—entitled “Science for Agriculture,” published by Iowa State University Press, Ames, 1993. In this study, Huffman and Evenson examined the contribution of research, extension, and improvements in farmer’s schooling to productivity growth in U.S. agriculture between 1950 and 1982. They derived a separate rate of return to “pre-technology” or “pre-invention” research, which they define as “research directed specifically toward producing discoveries that enable and assist technology invention” (p. 42). A table that summarizes their findings is provided for the record.

Their estimates measure social rather than private rates of return. The social rate of return includes benefits from research that go to farmers, agricultural input suppliers, food processors, and consumers. The private rate of return, on the other hand, is the return to the individual or group that conducted it.

Their results indicate that while public agricultural research as a whole had a rate of return of 41 percent, the rate of return to pre-technology research was considerably higher, at 74 percent. Private agricultural research, which is almost entirely applied research, had a rate of return of 46 percent, comparable to public agricultural research. The private rate of return to private research is probably no more than 20 percent, indicating that a large share of the benefits from private research spills over to other firms and to consumers.

The results of pre-technology research often benefit a wide range of commodities and regions, whereas applied research tends to be more commodity- or location-specific. This may explain why pre-technology research has apparently earned a higher rate of return. Public support for pre-technology research is especially important because the private sector lacks an incentive to fund it. Pre-technology research is usually long-term and high-risk in nature, and the results are often too general to be patented.

[The information follows:]

Social Rates of Return to Agricultural Research, Extension and Education

<i>Source</i>	<i>All agriculture (percent)</i>
Public agricultural research (all)	41
Public pre-technology research	74
Public extension	20
Private research	46
Farmer’s schooling	40

Source: W.E. Huffman and R.E. Evenson, “Science for Agriculture,” Iowa State University Press, Ames, 1993. Table 9.1, p. 245.

RETURNS TO NRI-FUNDED RESEARCH

Question. What are the returns to research funded through the National Research Initiative specifically?

Answer. To our knowledge, no study has estimated the returns to research funded specifically through the National Research Initiative (NRI). However, support for fundamental, pre-technology research is a stated goal of the NRI. According to the NRI annual report prepared by the Cooperative State Research, Extension, and Education Service, 63 percent of NRI grants were awarded for fundamental research in 1994. This implies that a high proportion of NRI funds are allocated to pre-technology research. Given the findings of the Huffman and Evenson study, this would indicate that research funded through the NRI might earn a rate of return above the average for all USDA research.

DOCUMENTATION FOR RETURNS TO RESEARCH

Question. What is the documentation for these findings?

Answer. The findings about returns to research are documented in a 1996 report issued by the Economic Research Service, “Agricultural Research and Development, Public and Private Investments Under Alternative Markets and Institutions,” Agricultural Economic Report No. 735 and in a Wallace Huffman and R. E. Evenson study, “Science for Agriculture” that was published by the Iowa State University Press in 1993.

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COOPERATIVE STATE RESEARCH, EDUCATION, AND EXTENSION SERVICE

QUESTIONS SUBMITTED BY SENATOR COCHRAN

FOOD SAFETY

Question. Funding of \$4.365 million, a \$2 million increase, is proposed for the Food Safety extension program. What is the justification for this increase? How are current program funds allocated and what have been the achievements of the program to date?

Answer. Currently, food safety education programs funded under the Smith-Lever Act, Section 3d, address a wide variety of food safety and quality issues nationwide, and their intended purpose is to provide education, skills, and information needed to safeguard America's food supply, while reducing the risk of foodborne illness among consumers. Funded programs provide education and training for the development and implementation of Hazard Analysis and Critical Control Point—HACCP—programs for the meat and poultry industry, and for Federal and state inspectors of meat and poultry plants. In addition, food safety education programs focus on increasing consumer awareness and understanding of food irradiation, microbiological pathogens, pesticide residues, and safe food handling practices for both industry and consumers.

As part of the President's Food Safety Initiative, the requested budget increase of \$2 million will be used to further enhance food safety education programs and to increase the capacity of the research and extension system to address the ongoing critical issues in food safety, particularly as they relate to Hazard Analysis and Critical Control Point education and to food handler certification training.

New HACCP regulations have presented significant challenges to the Department of Agriculture to provide compliance education for food handlers. Food handler certification training is provided by Cooperative Extension System faculty in many states as described below, and there is a growing trend for partnership and collaboration with state health departments and others to provide food handler certification training for food handlers from all areas of the food industry. States providing food handler certification training to industry, school foodservice workers, and health care facilities will be required to incorporate HACCP principles into their food handler programs. Food handler training and certification for foodservice workers at congregate meal sites for older Americans, foodbanks, day care, and child care facilities, among others, will also require compliance education to meet new Federal regulations. Increasingly, community kitchens, public service and public outreach programs rely on workers with limited foodhandling skills. HACCP and quality assurance education for consumers can provide education and training to support glean- ing and other food rescue programs, two priority areas for the Department.

Since 1991, 49 states and 5 territories have established food safety education programs with Smith Lever 3d funds and are addressing at least one of three major food safety educational objectives:

- To increase the adoption of recommended food handling practices
- To improve practices and processes that promote the production and protection of a safe food supply
- To improve the understanding of risks and responsible practices related to food and health

In subsequent years, food safety education programs have achieved the following impacts based on participant surveys:

- 42 percent of food safety education program participants have increased their adoption of recommended food handling practices.
- 70 percent of participants have increased their adoption of practices that protect the food supply.
- 53 percent of participants have increased their knowledge of food safety public policy issues.

Food safety education funds were used to support the development of the National Food Safety Database, which completed its second phase of development in fiscal year 1996. The database is now available on the World Wide Web for use by consumers, educators, researchers, and others seeking food safety information and resources for a wide variety of uses. Further development of the database will be completed with fiscal year 1997 competitive funds awarded to a multi-state, interdisciplinary team of database researchers coordinated at the University of Florida.

Food safety education funds were used to support the development of the Food Animal Residue Avoidance Databank, a central source of residue avoidance information for producers, veterinarians, extension specialists, and regulatory agencies. Drug and pesticide tolerances for food animal products, residue screening methods,

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and pharmacokinetics of chemicals in food animals have been included in the database. In fiscal year 1996, the Food Animal Residue Avoidance Databank grew to include a seafood and aquaculture component. The Databank has been jointly developed by a multi-state, interdisciplinary team of researchers at the University of California-Davis, North Carolina State University, and the University of Florida. The University of Illinois, a partner in the development of the Food Animal Residue Avoidance Databank, is no longer active in the project.

Food safety education programs funded through Smith Lever 3d have included the following:

- 24 states and territories have implemented Hazard Analysis and Critical Control Point education programs with food safety education funds.
- 20 states and territories have implemented food safety programs related to biotechnology.
- 28 states and territories have conducted educational programs focused on microbiological pathogens.
- 24 states and territories have developed educational programs on pesticide residues.
- 44 states and territories have conducted educational programs in food processing and food preservation.

Audiences targeted by food safety education programs funded through Smith Lever 3d have included the following:

- 33 states and territories have implemented food safety programs targeting youth audiences.
- 32 states and territories have targeted industry.
- 8 states and territories have focused on providing food safety education to immigrants, those with low literacy skills, or those who speak English as a second language.

Since the program's inception in 1991, approximately \$18.5 million—\$10.5 from Federal sources, and \$8 million from State matching funds—have supported the development and implementation of 283 food safety education projects. More than half of those funded projects remain active and continue to impact both national and international audiences.

INTEGRATED PEST MANAGEMENT

Question. How have extension activities supported with Integrated Pest Management (IPM) funds accelerated the transfer of proven pest management technologies from the researchers to farmers, crop consultants, ranchers, and other users?

Answer. Presently, \$10.8 million of Smith-Lever 3(d) funds are distributed to land-grant universities for extension activities to educate farmers and others about IPM methods. This investment has resulted in an increased use of IPM methods by farmers in the United States. The extension effort is focusing on the expansion of team-based, multidisciplinary programs in areas where tough pest problems continue to cause major losses to growers, threaten the competitiveness of food industries, and sometimes pose unacceptable risks to the environment and workers. USDA investments have resulted in improved management of a wide array of pests that inflict economic and quality damage on nearly every crop produced in the country.

The Department is supporting IPM education programs at every land-grant university in the country, and successful outcomes resulting from this investment can be cited for virtually every state. At Mississippi State University, Cooperative Extension estimates that its IPM education efforts have helped cotton growers increase their yields by approximately \$50 per acre and reduce control costs by approximately \$40 per acre, an economic benefit to Mississippi cotton growers of more than \$90 million. The use of IPM tactics has played a crucial role in maintaining the viability of cotton as one of Mississippi's leading agricultural commodities, despite the problems with insecticide resistance. Research and extension efforts conducted by the University of Missouri have provided Missouri farmers with resistant soybean varieties and other management techniques that have increased their profits by \$7.5 million per year. It is estimated that Iowa corn farmers save \$15 million annually as a result of improved management of black cutworms made possible by Iowa State University's early-monitoring program. Washington Cooperative Extension has worked closely with the Agricultural Research Service to implement an Area-wide IPM Program for codling moth on over 3,000 acres of apples. This program has reduced pesticide use by over 75 percent, improved quality, and increased net profits by more than \$30 per acre. The University of Wisconsin's IPM program developed decision support software that saved potato growers more than \$5.9 million per year by reducing input costs while protecting the water resources of the region through

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reductions in applications of pesticides, nitrogen and water. Stored grain IPM strategies developed by Kansas State University research and extension staff helped reduce pest management costs by 45 to 70 percent, leading to a net savings of more than \$1 million per year in Kansas. These technologies have been distributed nationwide to over 2,400 elevator operators. In Oklahoma alone, elevator operators and producers have saved \$20 million per year by reducing pesticide use and grain losses.

PESTICIDE APPLICATOR TRAINING

Question. Funding of \$1.5 million is being proposed for fiscal year 1998 to initiate a redesigned Pesticide Applicator Training Program. No funding was provided for the program for fiscal year 1997. Is this program currently being carried out? How will the program be redesigned?

Answer. It is anticipated that \$1.7 million will support the Pesticide Applicator Training Program in fiscal year 1997 through a reimbursable agreement with the Environmental Protection Agency. The proposed funds would provide "seed money" for states to develop partnerships with other public programs such as EFNEP, 4-H, Master Gardener and selected private organizations to educate the general public, especially homeowners and small or part-time farmers that will reduce exposure of toxic pesticides to users and the environment. Educational programs are needed in the areas of risk management that will mitigate exposure, when pesticides are used in a pest management program, and minimize risk to public health and the environment. The lack of education in use of pesticides has resulted in gross misuse in home environments, threatening personal health, as well as possibly causing the loss of the pesticide to production agriculture.

CHILDREN, YOUTH, AND FAMILIES, AT RISK

Question. An increase of almost \$2.15 million is requested for the Children, Youth, and Families at Risk [CYFAR] program. Of this increase, \$446,000 is to bolster ongoing programs and \$1.7 million is to be targeted to the 1890 Institutions. What is the justification for the increase in funding for this program?

Answer. Since 1991, USDA has received an annual appropriation to expand Extension programs to reach at-risk children and families. The Children, Youth, and Families at Risk [CYFAR] National Initiative mission is to marshal resources of the land grant university Cooperative Extension System to develop and deliver educational programs that equip limited resource families and youth who are at risk for not meeting basic human needs, to lead positive, productive, contributing lives.

The CYAR funds are distributed to 1862 land-grant universities' Cooperative Extension Service through a competitive application and review process. Projects are funded for five years. Since only 1862 land-grant universities have been eligible for funds, they were urged to partner with 1890 universities on Children, Youth, and Families Networks and State Strengthening Projects. Changes in the 1996 Farm Bill allow 1890 institutions to apply for these programs—if there is new or increased funding over the fiscal year 1995 appropriated level.

Increased funding would open the CYFAR Initiative to 1890 universities and provide them the opportunity to support community-based programs for children, youth and families at risk. Educational resources of the entire university/Extension System could be made available to people and communities least likely to have access. 1890 universities would be able to support prevention education programs which meet critical needs of children and families.

Question. How are the current program funds allocated and what has been accomplished through the program?

Answer. In 1997, Children, Youth and Families at Risk funds have been allocated for community-based projects for at risk children and their families and for support systems for these community-based projects.

<i>Children, Youth and Families at Risk</i>	<i>Fiscal year 1997</i>
Youth At Risk Community Project Renewal	\$149,834
40 State Strengthening Projects—50 percent to communities	6,709,787
Five CYF Networks	900,000
CYFERNet Coordination	184,000
Technical Assistance liaisons	215,000
CYFAR Evaluation Collaboration	494,000
Annual CYFAR Conference—for community projects	40,000
Annual Report Publication, Distribution	40,059
CYFAR Video/Brochures: Product/Distribution	25,000
State Strengthening Review Team Expenses	15,000

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<i>Children, Youth and Families at Risk</i>	<i>Fiscal year 1997</i>
State Strengthening Project Meeting	17,000
Subtotal	8,789,680
Federal Administration	764,320
Total	9,554,000

Through this Initiative, the Cooperative State Research, Education, and Extension Service has supported 170 community-based projects with sites in over 500 communities in 49 states and 3 territories. These programs serve 99,000 youth and 17,000 parents.

CYFAR projects incorporate research-based strategies for effective programs through collaboration, citizen involvement, inclusiveness, community-base, and ecological principles. Extension staff have formed collaborations with other community agencies and with citizens to create programs that meet critical needs of children and families. Each year state and local public and private agencies and organizations contribute cash and in-kind resources that match or exceed the Federal appropriation for the Children, Youth and Families at Risk program. In addition, approximately 25,000 youth and adult volunteers contribute time to the community programs.

In the interest of sustaining and expanding these community programs, the Children, Youth and Families at Risk Initiative has also funded a broad variety of support and technical assistance including:

The 5 National Children, Youth, and Family Networks which merge resources of all the land grant universities to provide research-based program and curriculum information, technical assistance, and training to communities. National Networks focus on Child Care, Family Resiliency, Science and Technology, Collaborations, and Decisions for Health.

CYFERNet, the electronic information infrastructure which links and supports all the five networks and assists communities with computer and technology issues.

Forty (40) State Strengthening Projects which each support a minimum of three community-based programs for at risk youth and children through the universities.

The Children, Youth, and Families at Risk Evaluation Collaboration which is assessing program impact and assisting communities evaluate their prevention education programs. This evaluation is finding that many of the community-based projects funded previously for five years by CSREES are no longer receiving federal funding and are continuing to operate with a variety of community and county public and private resources. The Children, Youth, and Family Networks have stimulated collaboration across universities, more efficient use of faculty and program monies, and broad dissemination of information on the World Wide Web which meets quality standards established by consensus of multidisciplinary faculty teams from many universities.

Question. What specific activities will be carried out with the increased funding proposed?

Answer. 1890 Universities could apply for Children, Youth, and Families at Risk Projects for statewide staff development and training, technical assistance to community programs, and direct funding to community programs designed to address needs identified by youth and adult citizens. Electronic connectivity could provide computers, software, Internet connections, and technology training for staff as well as youth and adult participants in community programs—to citizens least likely to have the resources for access.

This funding available on a competitive basis could insure active involvement of the 1890 universities in collaborative sharing of research and educational resources of the Children, Youth and Family Networks.

EXTENSION ACTIVITIES PROGRAMS

Question. The budget proposes to terminate a number of extension activities which this Administration has requested funding for in past years. These include farm safety, the Renewable Resources Extension Act, agricultural telecommunications, and rural health and safety. The budget indicates that these programs are state specific and/or do not address current regional or national priorities. With respect to each program listed above, please indicate why the Administration requested funding for the program in past years and why it now believes support of the program should be left to the discretion of the states to support through Hatch and Smith-Lever (b) and (c) formula funds.

Answer. The Administration has not requested continued funding for these programs because we are committed to responding to high priority problems of broad national concern. For example, CSREES has requested an increase of \$2 million for

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the Food Safety programs funded under Smith-Lever 3(d) because reducing the incidence of food-borne illness is a top priority of the public and the Administration. We have also requested an increase of \$2.146 million for the Children, Youth, and Families at Risk programs funded under Smith-Lever 3(d), which is consistent with the nationwide focus on at-risk youth.

Farm Safety and Rural Health and Safety.—Both of these programs are national in scope and affect rural, suburban, and urban populations. The farm safety and rural health and safety programs focus on the rural sector and, while the importance of these programs to some rural communities cannot be understated, the Administration believes that the availability of Smith-Lever 3(b) and (c) formula funds enables States to provide continued support of the programs as they deem appropriate. The formula funds permit a consistent, stable, dependable, and reliable programming source for State and county Extension cooperators and allow maximum flexibility in addressing national, regional, and/or local problems and issues.

Agricultural Telecommunications.—Continued funding of the Agricultural Telecommunications program has not been requested because the Administration has viewed the program as an opportunity to provide an infusion of funding to move the Cooperative Extension System forward in the areas of distance learning and computer networking. However, one of the criteria for award under the program has been the sustainability of a proposed project, or the ability of a project to continue and grow after receiving funding from the program. It is anticipated that these projects will be sustained through other funding sources, such as from the sale of products and/or the use of ideas and results from the projects by others. The projects could also be sustained through the use of formula funds if deemed appropriate by the States.

Renewable Resources Extension Act.—Funds provided under the Renewable Resources Extension Act provide for expanded natural resource education programs and are distributed to all States for educational programs and projects. Continued funding under the Act has not been requested because natural resource education programs are currently supported through the States' use of Smith-Lever 3(b) and (c) formula funding for Natural Resources and Environmental Management, which is one of the Extension base programs.

FORMULA FUNDS

Question. Why is no increase in Hatch and Smith-Lever formula funds proposed if the Administration is proposing to withdraw over \$9 million in federal support for these specific activities?

Answer. As part of the Administration's efforts to balance the budget, we have not requested increases in formula funding to offset the proposed eliminations of several programs.

WATER QUALITY PROGRAM

Question. Why is a reduction of \$1.672 million being proposed for Water Quality extension activities? What activities are currently being carried out through this program?

Answer. The President's \$1.672 million reduction for Water Quality extension activities reflects a desire to place emphasis in other priority areas in addition to water quality extension programs. It is anticipated that the state partners will secure additional funding to compensate for all or part of the federal reduction in funds. The Water Quality extension program provides support to every state for educational programs concerned with improving water quality. In addition, demonstration and hydrologic unit activities are funded throughout the country through almost 100 individual projects.

EXPANDED FOOD AND NUTRITION PROGRAM

Question. Would you please provide a description of the projects being funded through the Expanded Food and Nutrition Program [EFNEP].

Answer. EFNEP funds are distributed to all 50 States and 6 territories based on a formula that takes into account the percent of the population at or below 125 percent of poverty. These funds are used to deliver intensive nutrition education to limited resource youth and families with young children. Through an experiential learning process, adult participants learn how to make good choices to improve the nutritional quality of the meals they serve their families. They increase their ability to select and buy food that meets the nutritional needs of their family. They gain new skills in food production, preparation, storage, safety and sanitation, and they learn to better manage their food budgets and related resources such as Food Stamps. EFNEP is a program that produces results; surveys show that 87 percent

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of the Expanded Food and Nutrition Program adult graduates improve 1 or more food resource management practices; 92 percent improve 1 or more nutrition practices; and 69 percent improve 1 or more food safety practices; EFNEP reaches all ethnic groups, in urban and rural settings, with culturally sensitive educational programs leading to positive behavior change.

RURAL HEALTH AND SAFETY PROGRAM

Question. Would you please provide an update on achievements of the projects being carried out through the Rural Health and Safety Program?

Answer. The Rural Health and Safety program is conducted by the Cooperative Extension Service and community colleges in Mississippi to address the problems of shortages of rural health care professionals and health care services and facilities. The Mississippi program has established the Mississippi Rural Health Corps—MRHC—a program of 15 community and junior colleges. The program is designed to increase the number of nurses, licensed practical nurses, and other health care professionals with a commitment, up to three years, to work in a rural health care service, and to develop an Extension health education and community health service strategic planning program.

After four years of operation, the MRHC provided junior and community colleges with educational opportunities for 2,516 students in the health care field. Nearly 90 percent of those enrolled have either completed their courses of study or remained in training. Of the program's 962 graduates, over 90 percent are employed in rural communities. Because of additional state funds generated by the project, one community college was able to add Emergency Medical Technician—EMT—and Emergency Medical Responder—EMR—courses to its curriculum. Nearly 200 students have been able to complete this training in the first two years of the program. In fiscal year 1997, an additional distance learning downlink site will be established with the Mississippi Nurses Association in preparation for adding graduate nursing education programs to help provide continuing nursing education certification and advanced degree faculty members for the MRHC program.

Rural health educational activities of the Mississippi Cooperative Extension Service have been very effective in raising rural residents' awareness of health care needs and available services. Over 29,000 residents have received health screening and referral services, and community leaders have begun strategic planning efforts towards establishing local community health centers. Eleven county-wide health coalitions and two health councils have been established to address county needs in the areas of breast cancer, high blood pressure, and sexually transmitted diseases education. The councils are served by 154 certified MRHC volunteer lay health advisors.

A second program, conducted by Cooperative Extension and the School of Nursing at Louisiana's Southern University, provides community-based health promotion and disease prevention services to persons who otherwise would not have access to them. The Louisiana program has established a nurse-managed mobile health care clinic that is providing culturally sensitive community-based health education, assessments, screening, and referral services. The mobile clinic also provides nursing students with clinical learning experiences within the immediate environment of the medically at-risk and underprivileged populations. The Louisiana program has also made progress in developing a mobile clinic-based nurse education curriculum. This mobile clinic gives students a direct understanding of health care needs and obstacles to accessing health care services of the rural medically at-risk populations. Community residents are given the opportunity to advise in the operation of the mobile clinic. Many of the student nurses acknowledge a change in attitude and perception regarding diverse groups. This experience has enabled them to more effectively provide culturally sensitive health care services. Health education is provided to participants to enhance individual and family awareness in health promotion and disease prevention strategies, while increasing self-care capabilities in nutrition, dental health, aging, childhood immunizations, breast self-examination, hypertension, diabetes, and other illnesses.

A major focus of this Louisiana program has been serving the health care needs of the homeless. The program report states that: "This excursion into the world of the homeless has assisted all directly involved to clearly understand the problems associated with the population. The student nurses experienced a gamut of emotions from brief moments of depression over their experiences to absolute joy at being able to do something to assist the homeless to meet health care needs. Many of them express a new interest in the field of community nursing."

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AGRICULTURAL TELECOMMUNICATIONS

Question. Would you please tell us how the agricultural telecommunications funds have been spent in each of the last three fiscal years and who has received these funds.

Answer. The Cooperative State Research, Education, and Extension Service conducts a competitive grants program to make available to accredited institutions of higher education the funding allocated to the Agricultural Telecommunications Program.

In fiscal year 1994, 12 projects were funded in the areas of Staff and Faculty Training, Program Delivery and Program Development and Production. Grant recipients in the Staff and Faculty Training category included University of Alaska, and two projects at Iowa State University. In the Program Delivery category, grant recipients included University of Puerto Rico, University of Hawaii, California State University-Fresno, and University of Nebraska. In the Program Production and Development Category, grant recipients included New Mexico State University, University of Florida, University of Idaho, Texas A&M University, and Utah State University.

In fiscal year 1995, 12 projects were funded in the areas of Program Delivery; Innovative Program Development and Production; and Capacity Building. Grant recipients in the Program Delivery category included University of Massachusetts, University of California, University of Georgia, University of Arkansas. In the Innovative Program Development and Production category, grant recipients included Iowa State University, University of California, University of Illinois, and two projects at Cornell University. In the Capacity Building category, grant recipients included University of Florida, Pennsylvania State University, Texas A&M University.

In fiscal year 1996, 13 projects were funded in the areas of Program Delivery; Innovative Program Development and Production; and Capacity Building. In the Program Delivery category, grant recipients included Cornell University, University of Idaho, University of Arizona, Oklahoma State University, University of Vermont, Mississippi State University, University of Hawaii. In the Innovative Program Development and Production category, grant recipients included New Mexico State University, Ohio State University and Fort Valley State University. In the Capacity Building category, grant recipients included University of Arkansas-Pine Bluff, Kansas State University, and North Carolina State University.

1890 FACILITIES

Question. Please provide a summary of how the 1890 facilities funding has been allocated in each of the past three fiscal years, including how much was received by each institution and the facilities funded.

Answer. The information follows.

1890 FACILITIES (SEC. 1447)

Institutions	Fund status	Fiscal year—			Status
		1994	1995	1996	
Alabama:					
Alabama A&M University	Allocated ... Awarded	\$422,607 422,607	\$422,607 422,607	\$416,242 416,242	The construction of the joint Research/Extension Conference Center is planned.
Tuskegee University	Allocated ... Awarded	422,607 422,607	422,607 422,607	416,242 416,242	The renovation of the food processing laboratories and the construction of the Extension Activities Center in progress.
Arkansas: University of Arkansas at Pine Bluff.	Allocated ... Awarded	405,926 405,926	405,926 405,926	399,812 399,812	Construction of the small ruminant research and fish processing/marketing buildings in progress.
Delaware: Delaware State University.	Allocated ... Awarded	324,560 324,560	324,560 324,560	319,672 319,672	Construction plans underway for the Research/Extension herbarium.

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1890 FACILITIES (SEC. 1447)—Continued

Institutions	Fund status	Fiscal year—			Status
		1994	1995	1996	
Florida: Florida A&M University ...	Allocated ... Awarded	427,721 427,721	427,721 427,721	421,279 421,279	Construction of farm shops & equipment shed planned.
Georgia: Fort Valley State University.	Allocated ... Awarded	469,833 469,833	469,833 469,833	462,757	Plans include an education support center, a family life center, and an agricultural administrative support complex.
Kentucky: Kentucky State University.	Allocated ... Awarded	520,692 520,692	520,692 520,692	512,850 512,850	Plans include the construction of horticulture and entomology labs, renovation of the water quality lab and the purchase of land to develop a fish nutrition lab.
Louisiana: Southern University	Allocated ... Awarded	397,350	397,350	391,365	Plans include purchasing movable equipment for livestock pavilion, construction of a multi-purpose research & demonstration facility, and construction of an Extension telecommunication center.
Maryland: University of Maryland Eastern Shore.	Allocated ... Awarded	373,433 373,433	373,433 373,433	367,809 367,809	Plans include the construction of a food science & technology Research & Extension center, and a human development center.
Mississippi: Alcorn State University.	Allocated ... Awarded	410,717	410,717	404,531	Original plans included renovation of swine research & demonstration unit, construction of a poultry research feed mill and a fish hatchery.
Missouri: Lincoln University	Allocated ... Awarded	518,512 518,512	518,512 518,512	510,702 510,702	Design & construction for the beef/cattle facility and the multi-purpose building underway.
North Carolina: North Carolina A&T State University.	Allocated ... Awarded	534,886 534,886	534,886 534,886	526,830 526,830	The 5-year plan has been amended to include construction of an Extension/Research office building at the university farm complex and the renovation of the food & nutrition lab.
Oklahoma: Langston University ...	Allocated ... Awarded	418,263 418,263	418,263 418,263	411,963 411,963	Plans include construction and equipment/furnishing for a Research and Extension multi-purpose facility.
South Carolina: South Carolina State University.	Allocated ... Awarded	413,265 413,265	413,265 413,265	407,041 407,041	The renovation design for the 4-H camp has been completed. Construction is scheduled to begin in June 1997.
Tennessee: Tennessee State University.	Allocated ... Awarded	476,248	476,248	469,075	Proposed plans include the purchase of land and the construction of a Research/Extension facility.

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1890 FACILITIES (SEC. 1447)—Continued

Institutions	Fund status	Fiscal year—			Status
		1994	1995	1996	
Texas: Prairie View A&M University.	Allocated ...	597,336	597,336	588,339	Irrigation system, security fence, and waste disposal system installed.
	Awarded	597,336	597,336	588,339	
Virginia Virginia State University	Allocated ...	451,004	451,004	444,211	Parking lot for the Multi-purpose Pavilion has been completed. Diagnostic laboratory furnishings and satellite downlinking equipment has been installed in the Pavilion. Renovation of the meat goat handling & housing facilities underway.
	Awarded	451,004	451,004	444,211	

BUILDINGS AND FACILITIES

Question. Please provide the Committee with a summary report on each of the facilities funded through CSREES' Buildings and Facilities Program, including the federal funds provided, the total estimated cost of the project, the current status of the project, and the available non-federal project match.

Answer. This information is provided in the following table.

SUMMARY OF FUNDING AND PROJECT STATUS, CSREES BUILDINGS AND FACILITIES PROGRAM—FISCAL YEAR 1997
 (Dollars in thousands)

Name and location of facility	Total est. cost of project	Total Federal funding provided as of fiscal year 1997	Total non-Federal match available to date	Current status of facility
Poultry Science Facility, Auburn University (Auburn, AL).	\$12,000	\$6,000	Assurance of required match has come from State and poultry industry sources.	Design work is underway.
Animal Sciences Research and Teaching Facility, University of Arkansas ¹ (Fayetteville).	3,892	1,946	Matching funds of \$200,000 are now available, balance of \$720,000 is being pursued from State appropriations.	Design phase completed; preparing bids for construction phase.
Alternative Pest Control Containment/Quarantine Facility, University of California (Davis/Riverside).	38,118	10,921	Majority of matching funds are anticipated to become available in fiscal year 2000 (and in-kind value of land to be proposed as part of match).	Most of the programming & design phase is completed; develop. of construction documents to begin in fiscal year 1997.
Animal Reproduction & Biotechnology Laboratory, Colorado State University (Fort Collins).	5,302	2,651	Matching funds are available	Construction work began in fiscal year 1994. Full occupancy expected by Summer 1997.
Agricultural Biotechnology Laboratory, University of Connecticut (Storrs).	18,100	3,915	Matching funds to be made available annually by the State.	Most of the programming & design phase is completed; develop. of construction documents to begin in fiscal year 1997.
Center for Applied Aquaculture, Oceanic Institute (Waimanolo, HI) ² .	11,450	9,956	Availability of required match for the fiscal year 1995 increment of funding has not been determined.	Construction Ongoing.
Agricultural Biotechnology Facilities, University of Idaho (Moscow) ³ .	13,479	5,900	In 1991, Univer. provided \$1M to complete an aquaculture lab, but only \$250,000 came from the State. The State did not match during fiscal year 1992-1995. During fiscal years 1996-97, the university was able to obtain a total of \$4.3 million in bond commitments from the State with an additional \$1 million of State support anticipated for fiscal year 1997.	Design & construction completed on an Aquaculture Lab (1 component of the project). Preliminary stages only on the remaining components.
Biotechnology Center, Northwestern University (Evanston, IL).	24,000	8,536	Matching funds are available	All construction has been completed; the buildings are occupied.
Biological and Environmental Sciences Facility, DePaul University (Chicago, IL).	10,000	5,000	Matching funds are available	Most of the programming & design phase is completed; develop. of construction documents to begin in fiscal year 1997.
Institute for Natural Resources and Environmental Science, University of Maryland (Statewide).	20,000	10,000	\$1.1 million of matching funds have been provided by the State, with more matching funds anticipated from State appropriations next year.	Planning and design phases are underway.

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Center for Hunger, Poverty, and Nutrition Policy, Tufts University (Boston, MA).	16,340	8,170	CSREES is considering the University's proposed use of in-kind value of land as part of its matching contribution. Cash may become available for additional matching purposes in the future.	Most of the programming & design phase is completed; develop. of construction documents to begin in fiscal year 1997.
Center for Plant Biodiversity, Missouri Botanical Garden (St. Louis).	15,826	7,913	Matching funds are available	In final phase of construction work; occupancy date estimated at 12/01/97.
Center for Molecular Biology, Rutgers University (New Brunswick, NJ).	47,900	17,836	Matching funds are available	Construction Ongoing.
Center for Arid Land Studies, New Mexico State University (Las Cruces).	22,600	11,000	Matching funds are available	Most of the programming & design phase is completed; develop. of construction documents to begin in fiscal year 1997.
Ctr. for Resch. on Human Nutr. & Chronic Disease Prevention, Wake Forest University (Winston-Salem, NC).	108,607	18,108	Matching funds are available	Construction Ongoing.
Research Greenhouse, Cornell University (Ithaca, NY) ⁴	1,212	606	Matching funds are available	Construction completed; building is occupied.
Lake Erie Soil & Water Research & Education Center, The University of Toledo (Toledo, OH).	5,600	2,800	Matching funds made available through State appropriations in fiscal year 1994.	Construction Ongoing.
Forest Ecosystem Research Laboratory, Oregon State University (Covallis).	24,000	10,000	Matching funds are available	Most of the programming & design phase is completed; develop. of construction documents to begin in fiscal year 1997.
Animal Resource Wing, South Dakota State University (Brookings).	11,600	5,400	Matching funds are available	Design work to be initiated in fiscal year 1997.
Agricultural, Biological, & Environmental Research Complex, University of Tennessee (Knoxville).	38,500	10,434	Matching funds of \$5-6 million are available now, the balance to be pursued from State appropriations.	Most of the programming & design phase is completed; develop. of construction documents to begin in fiscal year 1997.
Horse Science and Teaching Center, Middle Tennessee State University (Murfreesboro).	5,170	2,585	MTSU has requested the award to be made to the MTSU Foundation since the univer. has not been able to obtain the matching funds required. CSREES is currently reviewing the proposed request to change the award recipient to the Fdn. since they can provide the match.	Design work to be initiated in fiscal year 1997.
Center for Southern Crop Improvement, Texas A&M University (College Station).	14,500	7,000	Matching funds are available	Most of the programming & design phase is completed; develop. of construction documents to begin in fiscal year 1997.
Animal Disease Biotechnology Facility, Washington State University (Pullman).	54,000	23,400	Matching funds are available	Construction Ongoing.
Totals	522,196	190,077		

¹ Includes carryover funds from fiscal year 1995 in the amount of \$946,000. ² Includes carryover funds from fiscal year 1994 and 1995 in the amount of \$3,581,000. ³ Includes carryover funds from fiscal year 1993 and 1994 in the amount of \$1,266,000. ⁴ Includes carryover funds from fiscal year 1993 in the amount of \$232,000.

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HIGHER EDUCATION PROGRAMS

Question. Please provide the Committee with a report on each of the CSREES higher education programs, indicating the institutions receiving grants under each program and an assessment of how each program is meeting its objectives.

Answer. In most programs, fiscal year 1997 awards currently are being processed. The most recent funding information is provided for each program, as follows.

Higher Education Challenge Grants Program

Institutions funded in fiscal year 1996 are the following:

California Polytechnic State University-San Luis Obispo
California State University, Chico
Cornell University
East Carolina University
Iowa State University
Kansas State University
Louisiana State University
Michigan State University
Mississippi State University
Montana State University
Ohio State University
Oklahoma State University
Rutgers University
Salish Kootenai College
Southern Illinois University
State University of New York College of Environmental Sciences and Forestry
Tarleton State University
Texas Tech University
Texas A&M University
University of Connecticut
University of Delaware
University of Florida
University of Georgia
University of Hawaii at Manoa
University of Illinois at Urbana-Champaign
University of Kentucky
University of Maryland, College Park
University of Minnesota-Twin Cities
University of Nebraska
University of North Carolina at Chapel Hill
University of Rhode Island
University of Tennessee, Knoxville
University of Texas-Austin
University of Wisconsin-Platteville
University of Vermont
Utah State University
Virginia Polytechnic Institute and State University
Washington State University

The objective of the Challenge Grants Program is to enable colleges and universities to provide high quality education in the food and agricultural sciences required to strengthen the Nation's food and agricultural scientific and professional work force. The program is accomplishing this by funding model projects that address regional and national higher education issues, use creative approaches to teaching, and foster partnerships among universities and between universities and the private sector. The program doubles the Federal investment since it requires dollar-for-dollar matching. The program serves both land-grant and other institutions with baccalaureate and higher degree programs in food and agricultural sciences, making it the centerpiece of USDA's teaching grants programs. An exciting array of projects funded under the program are serving to revitalize agriscience and business curricula, enhance faculty teaching skills, introduce and emphasize international issues and strengthen students' problem solving skills.

Hispanic-Serving Institutions Education Grants Program

The Hispanic-Serving Institutions Education Grants Program is being initiated in fiscal year 1997. The program's objectives are to promote and strengthen the ability of Hispanic-Serving Institutions to carry out higher education teaching programs in the food and agricultural sciences. The program will accomplish these by awarding grants to Hispanic-Serving Institutions for projects that will address one or more

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targeted need areas: curricula design and materials development; faculty preparation and enhancement for teaching; instruction delivery systems and scientific instrumentation for teaching; student experiential learning, and student recruitment and retention. The program is competitive among Hispanic-Serving Institutions. Awards will be made later this fiscal year.

1890 Institution Capacity Building Grants Program

Institutions funded for teaching projects in fiscal year 1996 are:

Alabama A&M University
Alcorn State University
Delaware State University
Florida A&M University
Kentucky State University
Langston University
North Carolina A&T State University
South Carolina State University
Tennessee State University
Tuskegee University
University of Arkansas-Pine Bluff
University of Maryland-Eastern Shore
Virginia State University

Institutions funded for research projects in fiscal year 1996 are:

Alabama A&M University
Alcorn State University
Delaware State University
Florida A&M University
Fort Valley State University
Kentucky State University
Langston University
North Carolina A&T State University
Southern University and A&M College
Tuskegee University
University of Maryland-Eastern Shore
University of Arkansas-Pine Bluff
Virginia State University

The highly competitive 1890 Institution Capacity Building Grants Program serves as the crux of the Department's high-priority initiatives to advance the teaching and research capacity of the 1890 Land-Grant Institutions and Tuskegee University. It reflects USDA's commitment to encourage more minorities to prepare for careers as food and agricultural scientists and professionals. The program meets these objectives by providing support for teaching and research projects in high-priority areas targeted by the institutions and USDA. Matching support from non-Federal dollars is strongly encouraged. Another component of the program that assists the 1890 Institution to build teaching and research capacity is the required cooperation of the institutions with one or more USDA agencies in developing a proposal and carrying out a project.

Multicultural Scholars Program

Grants are awarded every two years. Thus, institutions funded in fiscal year 1997, with combined 1996 and 1997 funds, include:

Alabama A&M University
California State University, Fresno
California Polytechnic State University-San Luis Obispo
Cornell University
Michigan State University
New Mexico State University
North Dakota State University
Oklahoma State University
Pennsylvania State University
Purdue University
Rutgers University-Cook College
Seton Hill College
South Dakota State University
Tennessee State University
University of Arkansas
University of Florida
University of Hawaii at Manoa

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University of Idaho
University of Illinois at Urbana-Champaign
University of North Dakota
University of Vermont
University of Wisconsin-River Falls
University of Wisconsin-Stout
Virginia Polytechnic Institute and State University

The Multicultural Scholars Program ultimately aims to increase the participation of America's diverse talent in the food and agricultural work force and to advance the educational achievement of all Americans. The program strives to attract and educate more students from groups currently underrepresented in the food and agricultural sciences for careers in agriscience and agribusiness. The program accomplishes these goals by providing undergraduate scholarships for outstanding students from such underrepresented groups. The program is open to all colleges and universities. Since the program began in 1994, 206 scholarships have been provided. The Federal investment in the program leverages state and private support via a 25 percent matching requirement.

USDA National Needs Graduate Fellowships Grants Program

Institutions funded in fiscal year 1996 are:

Colorado State University
Cornell University
Iowa State University
Kansas State University
Michigan State University
North Carolina State University
Ohio State University
Pennsylvania State University
Purdue University
Texas A&M University
University of Missouri
University of Minnesota
University of Nebraska
University of Chicago
University of Illinois at Urbana-Champaign
University of Florida
University of California, Davis
University of Wisconsin-Madison
University of Washington
Virginia Polytechnic Institute and State University

Begun in 1984, the USDA National Needs Graduate Fellowships Grants Program seeks to stimulate the development of food and agricultural scientific expertise in targeted national need areas. This program represents a key investment strategy, as it is the only Federal program targeted specifically to the recruitment and training of pre-doctoral students for critical food and agricultural scientific positions. The program achieves its goal by providing funds competitively to universities for attracting and supporting outstanding graduate students to pursue advanced degrees in areas of the food and agricultural sciences experiencing shortages of expertise. Over the 12 years of this program, approximately 915 fellows have been trained within 6 areas, namely Plant and Animal Biotechnology; Human Nutrition and/or Food Science; Water Science; Engineering—Food, Forest Products, or Agricultural; and, Marketing or Management—Food, Forest Products, or Agribusiness. Graduates of the program are working in private industry, with such major companies as Kellogg, Nabisco, Kraft, General Foods, American Express Company, and General Mills, as well as with major universities. They hold such positions as Product Engineer, Research Scientist, Econometrician, Chemical Engineer, Extension Economist, and teaching positions from Instructor to Professor.

Tribal Colleges Endowment Fund

All 29 tribally controlled Land-Grant Institutions were funded in the Tribal Colleges Endowment Fund in fiscal year 1996. They are:

Bay Mills Community College, MI
Blackfeet Community College, MT
Cheyenne River Community College, SD
College of the Menominee Nation, WI
Crownpoint Institute of Technology, NM
D-Q University, CA

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Dull Knife Memorial College, MT
Fond du Lac Tribal and Community College, MN
Fort Belknap College, MT
Fort Peck Community College, MT
Fort Berthold Community College, ND
Haskell Indian Nations University, KS
Institute of American Indian Arts, NM
Lac Courte Oreilles Ojibwa Community College, WI
Leech Lake Tribal College, MN
Little Hoop Community College, ND
Little Big Horn College, MT
Navajo Community College, AZ
Nebraska Indian Community College, NE
Northwest Indian College, WA
Oglala Lakota College, SD
Salish Kootenai College, MT
Sinte Gleska University, SD
Sisseton Wahpeton Community College, SD
Sitting Bull College, ND
Southwestern Indian Polytechnic Institute, NM
Stone Child College, MT
Turtle Mountain Community College, ND
United Tribes Technical College, ND

The Tribal Colleges Endowment Fund, launched in 1996, distributes interest earned by an endowment established for the 29 tribally controlled Land-Grant Institutions, as authorized by law in 1994. The Endowment Fund seeks to enhance education in food and agricultural sciences and related areas for Native Americans by building educational capacity at these institutions in the areas of curricula design and materials development, faculty development and preparation for teaching, instruction delivery systems, experiential learning, equipment and instrumentation for teaching, and student recruitment and retention.

Tribal Colleges Education Equity Grants

All 29 tribally controlled Land-Grant Institutions were funded under the Tribal Colleges Education Equity Grants Program in fiscal year 1996. See above list of institutions.

This program, launched in fiscal year 1996, is a formula program designed to enhance educational opportunities for American Indians by strengthening instruction in the food and agricultural sciences at 1994 Land-Grant Institutions. This is accomplished by strengthening instructional programs in the food and agricultural sciences at the 29 tribally controlled colleges designated as the 1994 Land-Grant Institutions. These institutions serve approximately 14,000 American Indian students. Funded projects focus on undergraduate and graduate studies in the food and agricultural sciences and must address one or more of the following need areas: (1) Curricula Design and Materials Development; (2) Faculty Development and Preparation for Teaching; (3) Instruction Delivery Systems; (4) Student Experiential Learning; (5) Equipment and Instrumentation for Teaching; and (6) Student Recruitment and Retention. Each institution is required to develop a plan of work that addresses the institution's long-range goals and shows how these funds will be used to strengthen institutional capacities.

CHALLENGE GRANTS PROGRAM

Question. Why is increased funding being requested for the Institution Challenge Grants program for fiscal year 1998?

Answer. American higher education in the food and agricultural sciences must continually address a number of issues to maintain its quality and competitiveness. The USDA Higher Education Institution Challenge Grants Program is the Department's flagship initiative to ensure excellence in education by stimulating and providing incentives for institutional change. This program has shown its worth by moving higher education in the following directions over the last seven years. An increasing number of joint degree programs in agribusiness have emerged between colleges of business and colleges of agriculture. Faculty in colleges of agriculture are increasing their skill in working with multicultural student bodies through specially designed workshops. Significant numbers of faculty have participated in workshops that have reoriented them from use of traditional lecture methods to experiential learning and problem solving for students. Undergraduate students more often participate in research in biotechnology, environmental management, and other impor-

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tant emerging fields. Institutions more often partner to accomplish their educational goals. However, current funding is not adequate to meet the needs or to fully capture the potential benefits to be derived from the program. For example, there are critical needs to expand curricula to include global perspectives and to enhance graduate education, which the program does not have the capacity to accomplish. The changing nature of higher education and its students requires more emphasis on the utilization of various new delivery systems to promote outreach and flexibility and the creation of partnerships among institutions to make higher education more efficient and cost-effective. Over time, inflation has negatively impacted project scope. Over the past seven years, only about 22 percent of approximately 1,000 excellent proposals generated by this highly competitive program could be funded. In fiscal year 1997, this program experienced a cut of \$.35 million from the level of fiscal year 1996. An increase in 1998 will return the program to the 1996 funding level and will enable four to five more colleges to undertake projects, including international projects, that promote excellence in agricultural education. In order to really achieve the potential of this program to change the face of food and agricultural higher education at both the undergraduate and graduate levels, sufficient funds must be allocated. At the current and projected size, the potential benefits cannot be fully realized.

SPECIAL RESEARCH GRANTS

Question. The fiscal year 1998 budget proposes a new \$2 million food safety competitive special research grants program. Why is a special research grants program being proposed? You are also proposing to target food safety increases through the National Research Initiative (NRI) competitive grants program. Why is a special research grants program needed? Why can't this research be funded through the NRI?

Answer. The proposed special research grant will be more responsive and able to address more specific research priorities within a shorter time frame. In the past, CSREES has been asked by FSIS to assist them with research that would address their specific needs in providing a scientific basis for setting policies or providing information to food producers, processors, handlers, and consumers; to develop improved analytical techniques for detecting and measuring contaminants in foods; and to develop intervention techniques that would prevent or eliminate contaminants. The Agency funds food safety research through formula funds (including Hatch, Evans-Allen, and Animal Health and Disease Acts), competitive grants (through the NRICGP), and Congressionally directed special research grants. The research is conducted by the Agency's land-grant university partners and other co-operators. The current programs afford little flexibility for the Agency to direct its food safety research in a timely manner to address specific high priority needs identified by USDA action agencies and other federal and state food safety experts. The new special grants program will increase the Agency's ability to respond rapidly to research questions. NRI funding allows the Agency to research more fundamental, often longer-term, research problems.

BINATIONAL AGRICULTURAL RESEARCH AND DEVELOPMENT—BARD

Question. The budget proposes \$2.5 million for United-States-Israel Binational Agricultural Research and Development program (BARD), a \$500,000 increase above the 1997 level. Why is an increase in funding for this program being proposed, especially given the fact that the Administration is proposing the elimination of funding for a number of on-going CSREES activities?

Answer. The \$2.5 million requested for the BARD program would restore funding to the level provided by CSREES for BARD in each of the fiscal years 1994, 1995, and 1996. CSREES also requested \$2.5 million for BARD for fiscal year 1997, but only \$2 million was appropriated. Restoration of the \$2.5 million funding level for BARD is requested because the Administration supports increasing the proportion of agricultural research funding that is awarded by merit review with peer evaluation, as is the case with the BARD program. The Administration also believes that the dollar-for-dollar matching support provided by the Israeli government under BARD results in a high quality return on the U.S. investment in the program. Further, each project funded under the BARD program is a joint effort between U.S. and Israeli scientists, which exemplifies the integrated approach to problem solving preferred by the Administration in meeting the challenges facing U.S. and global agriculture. The challenges of today and the future are more complex than those we have solved in the past and require the multi-functional, multi-disciplinary, multi-institutional approaches found under the BARD program.

Question. Please indicate the research projects which have been carried out under this program for each of the last five fiscal years.

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Answer. The BARD program has been funded through CSREES in fiscal years 1994 through 1997. While none of the 1997 funds have been awarded to date, a listing of the research projects funded in fiscal years 1994, 1995, and 1996 follows:

Binational Agricultural Research and Development Program—Fiscal year 1994

<i>Organization / title</i>	<i>Amount</i>
University of California:	
Davis, CA:	
Utilization of NMR Technology for Internal Non-Destructive Quality Evaluation of Fruits and Vegetables	\$135,000
Grapes, Wines, and Byproducts as Potential Sources of Antioxidants	120,000
Riverside, CA:	
Ecology, Population Dynamics and Genetic Diversity of Epiphytic Yeast Antagonists of Postharvest Diseases of Fruit	125,000
Characterization of Field-Scale Solute Transport in Spatially Variable Unsaturated Field Soils	78,120
Colorado State University, Ft. Collins, CO: Evaluation of Naked Proviral DNA as a Vaccine for Ovine Lentivirus Infection	140,000
University of Florida, Gainesville, FL:	
Strategies to Optimize Reproduction in Heat Stressed Dairy Cattle	120,000
Citrus Tristeza Virus: Molecular Approaches to Cross Protection	144,000
Iowa State University of Science and Technology, Ames, IA: Molecular Markers for Immunocompetence and Resistance to Disease	127,000
University of Minnesota, Minneapolis, MN: Bacterial Mineralization of Atrazine as a Model for Herbicide Biodegradation	119,000
North Carolina State University, Raleigh, NC:	
Aspects of Sugar Metabolism in Fruit as Determinants of Fruit Quality	125,000
Non-Destructive Quality Sensing of High-Valued Agricultural Commodities through Response Analysis	113,000
University of Nevada, Reno, NV: Mechanisms for Control of Leaf Growth during Salinity Stress	125,000
Cornell University, Ithaca, NY:	
Improving Preferential Flow Modules by Experimentation	107,000
Consequences of Nonequilibrium Pesticide Fate Processes on Profitability of leaching	141,000
Discovery and Use of Genes and Gene Products Coding for Proteins Useful in Biocontrol	131,000
Texas A&M Research Foundation, College Station, TX: Pathogenic Streptococcus in Tilapia: Rapid Diagnosis Epidemiology and Pathophysiology	94,000

Binational Agricultural Research and Development Program—Fiscal year 1995

<i>Organization / title</i>	<i>Amount</i>
University of California:	
Berkeley, CA: Relationship of Genes Conferring Epiphytic Fitness and Internal Multiplication in Plants in <i>Erwinia Herbicola</i>	\$137,500
Davis, CA:	
Involvement of the TMV-MP in the Control of Carbon Metabolism and Partitioning in Transgenic Plants	133,000
Environmental, Developmental and Physiological Bases of Curcubit Seed Quality ¹	115,370
Isoflavonoid Regulation of Root Bacteria	125,000
Wooliness in Peaches and Nectarines	109,778
Targeting of an Expressed Insect Selective Neurotoxin by its Recombinant Baculovirus	102,000
Genetic and Biochemical Characterization of Fructose Accumulation	106,614
Riverside, CA: Structural Elements and Neuropharmacological Features Involved in the Insecticidal Properties of an Alpha Scorpion Neurotoxin	105,000
University of Florida, Gainesville, FL:	
Mapping Quantitative Trait Loci in the Woody Perennial Plant Genus Citrus	130,000
Identification of DNA	125,000

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<i>Organization / title</i>	<i>Amount</i>
Purdue Research Foundation, West Lafayette, IN: An Inquiry into the Phenomenon of Enhanced Pesticide Transport Caused by Effluents	109,200
Michigan State University, East Lansing, MI: Analysis of Senescence-inducible Ribonuclease in Tomato	116,700
University of Nebraska, Lincoln, Nebraska: Pathogenicity and Sclerotia Development of <i>Sclerotinia sclerotiorum</i> : Involvement of Oxalic Acid and Chitin Synthesis	50,100
Cornell University, Ithaca, NY:	
Analysis of Quantitative Traits in Pepper using Molecular Markers	124,200
Polyphenoloxidases—Expression, Assembly, and Function	122,410
Texas A&M Research Foundation, College Station, TX: Improving Productivity of Cotton in Arid-Region Agriculture: An Integrated Physiological/Genetic Approach	110,000
Virginia Polytechnic Institute and State University, Blacksburg, VA: Environmental, Developmental, and Physiological Determinants of Curcubit Seed Quality ¹	63,820
University of Wisconsin, Madison, WI: Lymphocyte Response to Genetically-engineered Bovine Leukemia Virus Proteins	125,000
<i>Binational Agricultural Research and Development Program—Fiscal year 1996</i>	
<i>Organization / title</i>	<i>Amount</i>
University of California:	
Berkeley, CA: Functional Biogenesis of V-ATPase in the Vacuolar System of Plants	\$81,000
Davis, CA:	
Enhancement of Baculovirus Potency by Expression of Synergistic Scorpion Toxin	125,000
Genetic Diversity of Resistance Gene Clusters in Wild Population of <i>Lectuca</i>	125,000
Biosensors for On-line Measurement of Reproduction Hormones and Milk Proteins to Improve Dairy Herd Management	145,870
Resistance to Tomato Yellow Curl Virus by Movement Protein in a Single Cultivar	121,250
Creating Genetic Variation in Tilapia Through the Creation of an Artificial Center of Origin ²	145,500
Mapping and Tagging by DNA Markers of Emmer Alleles that Improve Traits in Wheat	137,000
Rhizosphere Ecology of Plant-Beneficial Microorganisms	130,410
Molecular Genetic Analysis of Citrus Acid Accumulation in Citrus Fruit	125,000
Purdue Research Foundation, West Lafayette, IN:	
Osmotin and Osmotin-like Proteins as a Novel Source for Phytopathogenic Fungal Resistance in Transgenic Carnation	125,000
Regulated Expression of Yeast FLP Recombinase in Plant Cells	135,610
Elicitor-Induced Response in <i>Lycopersicon Esculentum</i>	125,000
Study of the Basis for Toxicity and Specificity of <i>Bacillus Thuringiensis</i> -Endotoxins	113,630
Cornell University, Ithaca, NY: Virus Synergy in Plants	124,480
The Pennsylvania State University, University Park, PA:	
Developing Nutritional-Management Protocols Which Prevent Tibial Dyschondroplasia	125,000
Ozone Altered Stomatal/Guard Cell Function: Whole Plant and Single Cell Analysis	135,400
Identification of <i>Staphylococcus Aureus</i> Virulence Factors Associated With Bovine Mastitis	142,000
Texas A&M Research Foundation, College Station, TX: Role of Placental Lactogen in Sheep	116,130
Virginia Polytechnic Institute and State University, Blacksburg, VA: Creating and Characterizing Variation in Tilapia by Creating and Center of Variation ²	65,700

¹ Collaborative project funded at the University of California, Davis, and Virginia Polytechnic Institute and State University.

² Collaborative project funded at the University of California, Davis, and Virginia Polytechnic Institute and State University.

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SPECIAL RESEARCH GRANTS

Question. For each of the special research grants listed below which the Administration proposes to continue for fiscal year 1998, please indicate how the current funding is being allocated, the research activities being carried out, the location where the research is being performed, and what has been accomplished to date under the program: Critical Issues, Expert IPM Decision Support System, Global Change, Integrated Pest Management and Biological Control, Minor Crop Pest Management—IR-4, National Biological Impact Assessment Program, Pesticide Impact Assessment, Pest Management Alternatives, Rural Development Centers, and Water Quality.

Answer. The information for the special research grants follows:

Critical Issues.—These grant funds, which are appropriated at \$200,000 in fiscal year 1997, support research on critical issues impacting agriculture that require immediate attention. These funds are intended to initiate research efforts until other resources can be secured to address the critical issues. Six research proposals have been funded to address potato late blight and two research proposals have been funded to address vesicular stomatitis. The potato late blight work is being carried out at Washington State University, Oregon State University, the University of Idaho, the University of Wisconsin, and the Pennsylvania State University. The first North American Late Blight Workshop was convened which involved potato growers and processors, national potato organizations, university scientists, and the chemical industry. The major contribution of this workshop was the resulting set of recommendations for short- and long-term efforts needed to solve this problem. The vesicular stomatitis work is being carried out at Colorado State University and the University of Arizona. Work has been initiated to focus on the transmission of this virus, which was identified by commodity groups, regulatory veterinarians, and USDA researchers as a high priority problem.

Expert IPM Decision Support System.—A prototype information and decision support system was developed in collaboration with Purdue University and the Department of Energy's Argonne National Laboratory that integrates and manages information from multiple data sources. Information on the status of EPA review of pesticides, losses caused by pests, status of alternative tactics, status of minor use registrations, current research in progress, and priorities of IPM implementation teams are integrated in the Pest Management Information Decision Support System—PMI/DSS. The appropriation for this grant in fiscal year 1997 is \$177,000. The PMI/DSS supports a USDA/EPA Memorandum of Understanding to find alternatives to pesticides under regulatory review or being lost due to genetic resistance. The data base has identified priorities for the Pest Management Alternatives request for proposals for the past two years and interacts with the project system of the IR-4 Minor Use Registration Program. It also interacts with the identification of priorities for research and extension activities in the regional IPM special grant and special projects. It provides a mechanism for growers and grower organizations to interact with the priority process, and the ultimate result is to help insure that farmers have alternatives for managing pests at the specific local level. Work is carried out by CSREES National Program Leaders in IPM, NAPIAP, and IR-4 program areas working on PMI/DSS. The Argonne National Laboratory has a Washington, D.C. office where information, decision support personnel are housed, and there are daily interactions between CSREES and other USDA staff personnel, the program addresses priority commodity pest management needs due to voluntary pesticide cancellations and regulatory cancellations responding to the MOU and supplemental MOU between USDA and EPA. In fiscal year 1996, there were 58 pesticides and 374 uses identified and prioritized. The process included information on cancellations furnished by EPA, selected uses were sent to the states NAPIAP and IPM network, and impacts of cancellations effecting individual state agriculture reported back for compilation in the decision support system.

Global Change.—The work supported by this grant has a fiscal year 1997 appropriation of \$1,657,000. CSREES is in the process of establishing a network for monitoring surface UV-B radiation which will meet the needs of the science community of the U.S. and will be compatible with similar networks being developed throughout the world. The discovery of a deterioration of the stratospheric ozone layer and the occurrence of an ozone hole over polar regions has raised concern about the real potential for increased UV-B irradiance reaching the surface of the earth and the significant negative impact this could have on all biological systems, including man plus animals and plants of agricultural importance. This research is closely coordinated with other Federal agencies involved in the U.S. Global Change Research Program UV-Monitoring Network Plan. Colorado State University is managing the operating network which, when completed, will include all regions of the country. At

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least 30 sites are planned for the climatological network including sites in Hawaii, Alaska, and Puerto Rico. Ten sites have been operational with broad band instruments for up to three years, and it is planned to have at least twenty sites operational with new generation instruments by the summer of 1997. The research level network will begin with the first instrument to be installed at the Department of Energy Solar Radiation site near Ponca City, Oklahoma, as part of the Atmospheric Radiation Measurements field network. The USDA UV-B Network is to provide accurate, geographically-dispersed data on UV-B radiation reaching the surface of the earth, and to detect trends over time in this type of radiation. A network of a new multi-band instrument, which will provide the spectral information needed to support both biological and atmospheric science research and to serve as ground-truth for satellite measurements, was made available in 1996. These instruments have been deployed and are currently in operation at ten monitoring sites across the U.S. To gain network experience, broadband instruments, along with ancillary instruments, had been installed at ten selected field sites and operated for the last 28–36 months. An additional ten sites have been developed during the last 12 months, including those equipped with the new multi-band UV instrument. Data from all sites is transmitted daily to Colorado State University for analysis, distribution, and archiving.

Integrated Pest Management/Biological Control.—Research supported by IPM special grants, which has a fiscal year 1997 appropriation of \$2,731,000, continues to provide a science basis for the development of alternative approaches for managing pests including insects, mites, weeds, plant pathogens, and ectoparasites. Emphasis of the program has been on enhanced natural control, which emphasizes increased use of biological control, cultural control, and host resistance practices and the management of genetic resistance of pests. Research is being carried out in nearly all of the State Agricultural Experiment Stations. The original and current goal is to bring IPM into the 21st Century with a paradigm shift from past sole dependence on pesticides to an emphasis on natural control integrated with selective pesticides and biopesticides when pest population densities warrant their use. The more recent increase in joint research/extension collaboration has assisted bringing the accomplishments of research into implementation reality. All four regions have produced 12- to 15-page brochures documenting the impacts of research and extension efforts. IPM advances on 25–30 commodities are described in these brochures.

Minor Crop Pest Management, IR-4.—The Pest Management for Minor Crops IR-4 Program, formerly the Pesticide Clearance Program, is a joint effort between the State Agricultural Experiment Stations, CSREES, and ARS with a fiscal year 1997 appropriation of \$5,711,000. IR-4 provides the national leadership, coordination, and focal point for obtaining tolerance and safety data for pesticides and biological control agents for specialty crops such as horticultural crops. With Federal registration resulting from this research, a large number of small acreage crops such as vegetables, fruits, nuts, spices, and other specialized crops have been provided with needed crop protection against pests. Field work is performed at the State and Territorial Experiment Stations. Laboratory analysis is conducted primarily at the California, New York, Florida, and Michigan Agricultural Experiment Stations. Protocol development, data assimilation, writing petitions, and registration processing are coordinated through the New Jersey Agricultural Experiment Station. ARS is conducting minor use pesticide studies at several locations also. This research effort has been responsible for data in support of 2,074 food use clearances, which include 1,127 since 1984, 3,602 ornamental registrations, and research on 26 biopesticides resulting in 18 minor use registrations.

National Biological Impact Assessment Program.—This program, with a fiscal year 1997 appropriation of \$254,000, was established to facilitate and assess the safe application of new technologies for the genetic modification of animals, plants, and micro-organisms to benefit agriculture and the environment. This program supports the agricultural and environmental biotechnology community by providing useful information resources to scientists, administrators, regulators, teachers, and the interested public. The research for this program is being conducted by the Virginia Polytechnic Institute and State University. This computer-based information system now includes texts of Federal biotechnology regulations, proposed rules, and policy statements; databases of biotech companies, research centers, institutional biosafety committees, and state regulatory contacts; resource lists of publications, directories, bibliographies, and meetings; monthly newsletters developed and distributed by this program; relevant Federal Register announcements; and links to other electronic information resources. In addition, this program provides biosafety training through workshops for academic and corporate scientists, biosafety officers, and state regulators.

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Pesticide Impact Assessment Program.—Research funded by the National Agricultural Pesticide Impact Assessment Program—NAPIAP—which has a fiscal year 1997 appropriation of \$1,327,000, discovers, gathers, publishes, and distributes information relating to the use and effectiveness of pest management alternatives essential to the maintenance of U.S. agricultural crops and livestock production. These data involve evaluating the biologic and economic impact and consequences of restricting the use of key pesticides either through voluntary cancellations or regulatory action. This work is being carried out at 53 state and territorial Agricultural Experiment Stations. Competitively awarded research funds are coordinated through a lead state in each of the four regions of the U.S.—California, West; Ohio, North Central; Pennsylvania, Northeast; and Florida, South. NAPIAP's goals are defined in its strategic plan as: first, in collaboration with USDA, EPA, and Land-Grant partners, to focus activities on collecting and delivering high quality, science-based pest management information for use in the regulatory process; and second, maintain and enhance a strong partnership between the USDA and the Land-Grant System in order to continue the positive interactive flow of vital pest management information between the USDA, the regulatory community, and production agriculture.

Pest Management Alternatives.—The research supported by this grant, which has a fiscal year 1997 appropriation of \$1,623,000, represents a new proactive way to address and interface with environmental regulatory issues confronting agriculture. The goal of this research is to provide farmers and other pest managers with alternative pest management approaches and technologies when pesticide tools are lost due to regulatory action, voluntary withdrawal by the registrant, or the development of resistance. This research is being carried out by State Agricultural Experiment Stations, Land-Grant Universities, and other public and private research institutions and organizations. Examples of research supported by this program are (1) provides farmers and others with replacement technologies for agricultural chemicals lost due to regulatory actions, potential regulatory actions, or due to voluntary cancellation by registrants for which producers do not have effective alternatives; (2) provides effective alternative technologies for situations where pest resistance to pesticides limit adoption of integrated pest management strategies; and (3) facilitates implementation of new technologies on farms, ranches, forests, urban landscapes, and in homes, public, and commercial buildings.

Rural Development Centers.—The function of the Rural Development Centers, which has a fiscal year 1997 appropriation of \$423,000, is to increase the productivity of regional faculty both in doing research on rural issues and in using research to do effective outreach with rural communities. The number of research faculty who are addressing broader rural issues is declining in many places. The multi-disciplinary and multi-state work, supported by the Centers, becomes even more crucial in a period of reduced research emphasis. Critical needs are being met by Center's support, including public lands policy, changing rural migration patterns, fiscal alternatives for local governments, and forest stewardship education. The regional rural development centers include the following: Northeast Regional Center for Rural Development, Pennsylvania State University; North Central Regional Center for Rural Development, Iowa State University; Southern Rural Development Center, Mississippi State University; and Western Rural Development Center, Oregon State University. There is also a rural development project at North Dakota State University. The Rural Development Centers' mission is to strengthen rural families, communities, and businesses by facilitating collaborative socio-economic research and extension. Research programs are undertaken after evaluating broader regional and national priorities.

Water Quality.—This national, competitively-awarded grants program, which has a fiscal year 1997 appropriation of \$2,757,000, supports research to investigate the impacts of non-point source pollution from agriculture on water quality and to develop improved, sustainable agricultural practices and systems that protect the environment and are economically profitable. This program also supports research on five Management Systems Evaluation Area (MSEA) projects as part of the Midwest Initiative on Water Quality to develop new farming systems that protect water quality, with research located at 10 sites throughout the Corn Belt. Funds provided under the Water Quality Program have been awarded to institutions in virtually every state, so work is being carried out in all parts of the country. The MSEA projects of the Midwest Initiative on Water Quality are headquartered in Iowa, Minnesota, Missouri, Nebraska, and Ohio, with satellite locations in North Dakota, South Dakota, and Wisconsin. During the past three years, focus and allocation of resources have increased for surface water quality. Major progress has been made on these goals. Nitrogen testing research and implementation of the Pre-sidedress Nitrogen Test in the Northeast and Midwest is helping producers match the supply

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and demand for nitrogen, thus reducing excess application. Also, in the Pacific Northwest, nitrate lost from the root zone of irrigated potatoes can be effectively recaptured by following with a grain or forage crop. The Management System Evaluation Area modeling group has adapted, improved, and verified the usefulness of the Root Zone Water Quality Model as a tool for extending MSEA results beyond the research sites.

RANGELAND RESEARCH

Question. The fiscal year 1998 request proposes to terminate funding for rangeland research. What is the justification for this proposal? For each of fiscal years 1993–1997, please indicate how these funds have been allocated and the specific activities have been supported through the program.

Answer. The proposed elimination of this program is consistent with the emphasis on high priority national interest programs in the 1998 CSREES budget. Although this program is proposed for elimination, alternate sources of funding, including the Hatch Act formula and related base funded programs, permit institutions to fund research in those areas identified as high priority. This flexibility could provide for maintaining some of the rangeland research programs if the State institutions wish to continue the research. These projects could also be submitted for competition and possible funding under CSREES' National Research Initiative—NRI—Program.

The following tables list funds allocated and activities for the Rangeland Research program from fiscal years 1993–1996. No awards have been made in fiscal year 1997. The solicitation for applications for the fiscal year 1997 program was published in the March 1997 Federal Register. Proposals are due to CSREES by May 17, 1997.

Rangeland research

<i>Recipient / title</i>	<i>Amount</i>
Fiscal year 1993:	
Colorado State University, Cattle Preference as a Tool to Modify Riparian Vegetation	\$77,200
University of Nebraska, Influence of Genetic Variation in North American Leafy Spurge on <i>Apthona nigriscrutis</i>	74,740
Texas A&M University, Spatial Modeling of Succession in a Subtropical Savanna: An Integrated Approach	73,982
Utah State University, The Importance of Food and Companionship in Choice of Foraging Location by Sheep	77,200
USDA-ARS, Characterization of Seedbed Microclimate for Burn-Rehabilitation Planning	72,572
USDA-FS, Regulation of Seed Germination in Facultatively Fall-Emerging Grasses	77,175
Subtotal, Grants	452,869
SBIR	6,911
Biotechnology Risk Assessment	970
Federal Administration	14,250
Total	475,000
Fiscal year 1994:	
University of Arizona, Significance of Local Adaptation in Rangeland Revegetation with Native Species	34,549
Oregon State University, Quantifying the Impact of Rangeland Management on Stream Temperatures	68,500
South Dakota University, Effects of Stocking Rate and Grazing System on Patterns of Tiller Utilization	69,500
Texas A&M University, Tree/Shrub Influence on the Nitrogen Cycle of a Subtropical Savanna Ecosystem	69,500
University of South Dakota, Intraspecific Action of Allelochemicals in Leafy Spurge— <i>Euphorbia esula</i> L.—	13,790
Utah State University, Biological Control of Dyer's Woad with a Pathogenic Rust Fungus	61,000
Washington State University, The Influence of Grazing on Long-Term Site Productivity of Transitory Range	68,500

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<i>Recipient/Title</i>	<i>Amount</i>
USDA-FS, Regeneration Biology of Shadscale—Atriplex confertifolia	68,500
Subtotal, Grants	453,839
SBIR	6,911
Biotechnology Risk Assessment	14,250
Federal Administration	14,250
Total	475,000
Fiscal year 1995:	
Montana State University:	
Livestock, Forage, and Grasshopper Interactions: Cumulative Effects of Grazing	79,950
Integrated Management for Spotted Knapweed Infested Range ..	57,050
Texas A&M University:	
Hydrologic Mechanisms Determining Plant Species Interactions in Grazed Savannas	79,992
R:FR Regulation of Tiller Initiation: Is It Applicable to Range Grasses?	79,354
Bush Removal and Regrowth: Implications for Water Use and Aquifer Recharge	75,835
Utah State University, Behavioral Bases for Varied Diets of Ruminants	79,354
Subtotal, Grants	451,535
SBIR	9,215
Biotechnology Risk Assessment	14,250
Federal Administration	14,250
Total	475,000
Fiscal year 1996:	
Colorado State University, Grazing Impacts on Infiltration, Runoff, and Erosion in a Montane Riparian Ecosystem	79,999
Montana State University, Do Windbreaks Minimize Stress on Cattle Grazing Winter Range?	59,941
Texas A&M University:	
Quantification of Vegetation Transitions and Thresholds on Diverse Landscapes	79,893
Does Soil Carbon and Nitrogen Accumulation Beneath Plants Regulate Bunchgrasses?	80,000
USDA-FS:	
Nitrogen and Phosphorus Mineralization in Conifer and Aspen Soils	71,717
Basin Big Sagebrush Dominated Riparian Corridors-Dry Meadows as an Alternative Stable State	79,985
Subtotal, Grants	451,535
SBIR	9,215
Biotechnology Risk Assessment	14,250
Federal Administration	14,250
Total	475,000

SUSTAINABLE AGRICULTURE PROGRAM

Question. How is the \$8 million currently available for the Sustainable Agriculture Program being spent? For each of fiscal years 1993-1997, please show how these funds have been allocated and the specific activities which have been supported through the program.

Answer. For fiscal year 1997, the \$8 million allocated for sustainable agriculture spending on research and education is being awarded primarily through a regional competitive grants program. Of the funds being awarded through the four regional programs, roughly 90 percent is spent on competitive grants of \$30,000 to \$150,000 to universities, non-profit organizations, or public agencies. The remaining funding supports grants to farmers and ranchers for research, demonstration, or education efforts on their farm; these grants are typically under \$5,000 per project. About 2

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percent of the total fiscal year 1997 funds are being used for general sustainable agriculture education efforts through the National Agricultural Library and the Sustainable Agriculture Network, and about 2 percent of funds are used for national communications and program coordination. Less than 1 percent of funds were awarded directly from national office for special education projects or workshop and conference support. The regional funds typically provide for about 11 to 14 institution/agency research or education projects, and 25 to 35 farmer projects per year in each region.

Detailed fiscal year allocations are as follows:

	Fiscal year—				
	1993	1994	1995	1996	1997
Regional allocations (divided among 4 regions) ...	\$4,632,785	\$6,229,900	\$7,159,520	\$7,014,000	\$7,077,700
National initiatives/projects ¹	1,760,000	804,540	551,747	685,860	487,958
National communications/coordination				(346,000)	(219,000)
National Agricultural Library				(116,200)	(122,010)
SARE Sustainable Agriculture Network				(80,000)	(82,000)
National projects (education, conferences)				(143,660)	(64,948)
Subtotal	6,392,785	7,034,440	7,711,267	7,699,860	7,565,658
Federal Administration	201,750	222,000	243,360	243,000	240,000
SBIR	130,465	143,560	157,373	157,140	194,000
Biotechnology Risk Assessment					342
Total, SARE	6,725,000	7,400,000	8,112,000	8,100,000	8,000,000

¹ In 96 and 97, national allocations were more specifically broken out into subcategories.

HEADQUARTERS MANAGEMENT

Question. How much will CSREES expend for Headquarters management costs in fiscal year 1997? How does this correspond to your percentage program assessment?

Answer. It is estimated that CSREES will spend \$39.3 million in fiscal year 1997 for Headquarters management costs. These funds will be used to cover the salaries and benefits of Federal staff, travel, printing, supplies, equipment and other miscellaneous expenses necessary for the administrative oversight and coordination of CSREES programs. Funds from federal administrative set-asides, carry over funds, and reimbursable agreements with other Federal agencies are used to cover these operating costs. Management costs account for 4.3 percent of the total fiscal year 1997 appropriation for CSREES. With the \$7.1 million available in Direct Federal Administration funds, excluding earmarked grants and projects, and the current legislative set-asides of 3 or 4 percent, CSREES has continued to operate on extremely low administrative costs.

FOOD AND AGRICULTURAL EDUCATION INFORMATION SYSTEM

Question. CSREES recently gave a presentation on the Food and Agricultural Education Information System (FAEIS). How much funding is being allocated for this system for fiscal year 1997? Is funding included in the President's fiscal year 1998 budget request for this system? If so, where is it included?

Answer. In fiscal year 1997, Congress directed \$150,000 from the funds appropriated for the USDA Higher Education Challenge Grants Program be made available to support the continued operations of the Food and Agricultural Education Information System. This provided assured funding for the information system that furnishes the Department and its university partners with necessary baseline data for planning and coordinating efforts directed towards supporting higher education in the areas of food, agriculture, natural resources, forestry, family and consumer sciences, and veterinary medicine. While the fiscal year 1998 budget request does not explicitly cite this system, it is included.

NATIONAL RESEARCH INITIATIVE

Question. Please provide a summary of the geographical distribution of the competitive research grants awarded under the National Research Initiative for the last two years showing the state, entity and funding level.

[The information follows:]

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State/recipient	Fiscal year—	
	1996	1997
Alabama:		
Auburn University	\$256,749	\$378,265
University of Alabama, Birmingham		133,352
University of Alabama, Huntsville		
University of South Alabama		
Alabama A&M University	47,917	50,000
Alabama State University		45,000
Subtotal	304,666	606,617
Arizona:		
Arizona State University, Northern Arizona University	135,972	
University of Arizona	928,367	744,474
Subtotal	1,064,339	744,474
Arkansas:		
University of Arkansas	407,223	552,039
University of Arkansas for Medical Sciences	121,682	198,918
Subtotal	528,905	750,957
California:		
California Institute of Technology	5,000	106,781
University of California, Berkley	991,885	797,303
University of California, Davis	2,151,309	1,621,411
Loma Linda University		106,694
University of California, Los Angeles	238,032	111,544
University of California, Riverside	550,483	662,316
University of California, San Diego	208,643	97,073
University of California, Santa Barbara		116,283
University of California, Santa Cruz	97,357	
California State University, San Marcos	196,407	
Metropolitan Water District of South. California		110,233
Salk Institute for Biological Studies	186,958	
Stanford University		43,822
USDA, ARS	116,041	384,847
USDA, Forest Service, Pacific SW Station	228,798	204,602
Stephen W. Beam	82,000	
E. Harville		82,000
B. Manning		82,000
Subtotal	5,052,913	4,526,909
Colorado:		
Colorado State University	376,952	431,227
University of Colorado	92,267	118,430
University of Colorado at Denver	57,171	
USDA, ARS Northern Plains Area	116,283	
Midcontinent Ecological Sciences Center		111,814
Subtotal	642,673	661,471
Connecticut:		
University of Connecticut	229,876	173,409
Yale University	106,835	92,220
Connecticut Agricultural Experiment Station		50,000

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State/recipient	Fiscal year—	
	1996	1997
Economic Research Service		48,691
Trinity College		43,743
Subtotal	336,711	408,063
Delaware:		
E.I. de Pont de Nemours & Co	50,000	
University of Delaware	438,411	418,217
Subtotal	488,411	418,217
District of Columbia: Carnegie Institute of Washington	196,662	101,927
Florida:		
Florida A&M University	97,278	
Mote Marine Laboratory	40,273	
University of Florida	939,951	480,779
University of South Florida	104,716	
Subtotal	1,182,218	480,779
Georgia:		
Institute of Paper Science and Technology	128,436	110,922
University of Georgia research Foundation	233,222	923,535
USDA, ARS South Atlantic Area, Georgia	93,507	219,621
Subtotal	455,165	1,254,078
Hawaii: University of Hawaii		87,212
Idaho: University of Idaho	719,494	318,036
Illinois:		
University of Illinois	860,715	1,261,821
USDA, ARS Mid-West Area, Illinois	84,107	340,508
Illinois Institute of Technology		47,406
Jonathan E. Beever	82,000	
G. Copenhaver		82,000
Subtotal	1,026,822	1,731,735
Indiana:		
Purdue University	1,991,636	
Purdue Research Foundation		977,198
Indiana University		185,116
University of Notre Dame		174,424
Sally E. Johnson	81,896	
Subtotal	2,073,532	1,336,738
Iowa:		
Iowa State University	790,254	1,416,549
University of Iowa	243,086	
Rebecca L. Wilson	82,000	
Subtotal	1,115,340	1,416,549

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State/recipient	Fiscal year—	
	1996	1997
Kansas:		
Kansas State University	1,003,611	360,209
University of Kansas	106,835	.....
Subtotal	1,110,446	360,209
Kentucky:		
Murray State University	47,727	.....
University of Kentucky	509,585	261,929
Patrick D. Barnes	82,000	.....
Heather H. Wilkinson	82,000	.....
Subtotal	721,305	261,929
Louisiana:		
Louisiana State University Medical Center	112,140	.....
Louisiana State University A&M College .....	.....	328,772
Louisiana Technology University .....	.....	44,982
Timothy B. Mihue	82,000	.....
Subtotal	194,140	373,754
Maine: University of Maine	179,662	146,270
Maryland:		
Americal Center for Cell Biology	17,000	.....
Genetics Society of America	4,000	.....
University of Maryland	195,765	179,515
University of Maryland, Baltimore	109,091	.....
USDA, ARS Beltsville Area .....	.....	87,366
Amrit Bart	82,000	.....
Subtotal	407,856	266,881
Massachusetts:		
Massachusetts General Hospital	55,000	.....
Tutts University	663,206	186,523
University of Massachusetts	397,359	461,815
Boston University .....	.....	53,390
Stonehill College .....	.....	49,830
Worcester Polytechnical Institute .....	.....	34,950
International Association for Paratuberculosis, Inc .....	.....	5,000
Subtotal	1,115,565	791,508
Michigan:		
Michigan State University	1,355,363	839,971
Michigan Technological University	118,706	.....
University of Michigan	325,621	.....
M. Fisk .....	.....	82,000
Subtotal	1,799,690	921,971
Minnesota:		
University of Minnesota	1,035,805	901,104
Mayo Foundation	223,722

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State/recipient	Fiscal year—	
	1996	1997
Donna M. Becker	82,000
Mary L. Johnson	82,000
Subtotal	1,199,805	1,124,826
Mississippi:		
Mississippi State University	217,384	375,087
University of Southern Mississippi	154,097	.....
Subtotal	371,481	375,087
Missouri:		
University of Missouri	1,594,959	799,612
Washington University	418,904	.....
Donald L. Auger	82,000	.....
Subtotal	2,095,863	799,612
Montana:		
Montana State University	206,394	1,015,443
University of Montana .....	.....	113,972
Jacobs .....	.....	20,000
Subtotal	206,394	1,149,415
Nebraska: University of Nebraska	476,882	727,485
Nevada: University of Nevada	116,283	.....
New Hampshire:		
Dartmouth College	164,826	189,293
University of New Hampshire .....	.....	161,544
Subtotal	164,826	350,837
New Mexico: New Mexico State University	106,379	.....
New Jersey:		
Princeton University	94,925	.....
Rutgers University	154,903	467,866
University of Medicine and Dentistry of New Jersey .....	.....	116,283
Subtotal	249,828	584,149
New York:		
Boyce Thompson Institute	116,283	405,161
Canisius College	116,576	.....
Cold Spring Harbor Laboratory	97,147	.....
Columbia University	116,815	.....
Cornell University	1,676,390	1,937,458
N.Y. Botanical Garden/Inst. of EcoSystem Studies	512,858	.....
Rensselaer Polytechnic	92,267	.....
State University of New York, Albany	486,218	.....
State University of New York, Buffalo	121,697	.....
University of Rochester	126,607	.....
State University of Binghamton	87,366
State University of New York, Stony Brook	92,220

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State/recipient	Fiscal year—	
	1996	1997
SUNY, Environmental Science and Forestry		47,408
Syracuse University		168,026
Hemendinger		82,000
Heather G. Allore	82,000	
Alice C. Churchill	82,000	
Kenneth J. Schlather	82,000	
Subtotal	3,708,858	2,819,639
North Carolina:		
Bowman Grey Schol of Medicine/Wake Forest Univ	96,429	
Duke University	276,179	
East Carolina University	5,080	
Forest Service, Southeast Forest Experiment Station	84,651	89,516
North Carolina State University	1,279,943	838,411
University of North Carolina, Chapel Hill	523,443	228,420
Western Carolina University	13,765	92,220
Kristi M. Westover	82,000	
Subtotal	2,361,490	1,248,567
North Dakota:		
North Dakota State University	319,634	369,765
University of North Dakota	107,264	91,597
Subtotal	426,898	461,362
Ohio:		
Miami University	242,144	
Ohio state University research Foundation	859,899	460,457
University of Toledo	145,051	
Subtotal	1,247,094	460,457
Oklahoma:		
Oklahoma State University	597,852	145,731
University of Oklahoma, Health Sciences Center	187,867	224,280
University of Tulsa	59,079	
Subtotal	844,798	370,011
Oregon:		
Oregon State University	1,073,756	1,052,002
University of Oregon	320,584	87,366
Forest Service, NW Range and Experiment Station		201,560
R. Tuma		82,000
Robert G. Fjellstrom	82,000	
Subtotal	1,476,340	1,422,928
Pennsylvania:		
Drexal University	101,844	
Pennsylvania State University	801,015	1,220,867
Rodale Institute	219,253	
University of Pennsylvania	141,394	184,592
Carnegie Mellon University		97,306
Clarion University of Pennsylvania		49,912

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State/recipient	Fiscal year—	
	1996	1997
Duquesne University		96,902
USDA, ARS North Atlantic Area	242,408	
Subtotal	1,505,914	1,649,579
Rhode Island:		
Brown University	61,090	
Gordon Research Conference	40,900	7,000
University of Rhode Island	284,085	337,513
Subtotal	386,075	344,513
South Carolina:		
Clemson University	261,063	307,331
Medical University of South Carolina	47,917	116,698
Subtotal	308,980	424,029
South Dakota:		
South Dakota State University	116,767	510,390
University of South Dakota		87,366
Subtotal	116,767	597,756
Tennessee:		
East Tennessee State University	222,793	
University of Tennessee	406,306	92,145
Tennessee Technological University	24,400	
University of Memphis	252,047	
University of Tennessee at Memphis	82,792	
Subtotal	988,338	92,145
Texas:		
Baylor College of Medicine	243,121	694,642
Southwest Texas State University	178,164	
Texas A&M Research Foundation	1,055,097	1,112,635
Texas Tech University	381,401	194,859
University of Texas, Austin	286,127	189,293
University of North Texas		97,073
Prairie View A&M University		151,848
Southern Methodist University		135,663
USDA, ARS Southern Plains Area	142,142	
C. Dean		74,706
Stephen R. Craig	82,000	
Subtotal	2,368,052	2,650,719
Utah: Utah State University	121,051	409,847
Vermont: University of Vermont	49,975	125,576
Virginia:		
James Madison University	180,699	92,290
Virginia Polytechnic Institute and State University	331,554	871,902
U.S. Animal Health Association		5,000

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State/recipient	Fiscal year—	
	1996	1997
J. Christiansen		82,000
Subtotal	512,253	1,051,192
Washington:		
University of Washington	459,767	389,945
Washington State University	475,972	1,657,912
Children's Orthopedic Hospital and Medical Center		93,507
D. Reed		82,000
D. Berrigan		82,000
Subtotal	935,739	2,305,364
Wisconsin:		
Medical College of Wisconsin	126,260	
University of Wisconsin, Madison	1,872,564	1,500,011
Forest Service, Forest Products Laboratory	245,333	76,867
Marquette University		92,290
University of Wisconsin		49,610
Kenneth P. Blemings	78,073	
Paul E. Mozdziak	79,761	
Laura B. Regassa	82,000	
Subtotal	2,483,991	1,718,778
West Virginia: Marshall University	121,682	116,858
Wyoming: University of Wyoming	302,520	283,454
Total	45,971,071	41,630,469
Total grants awarded from fiscal year 1996 Appropriation		87,601,540
Federal Administration (4 percent)		3,769,400
Small Business Innovative Research Act		1,809,312
Biotechnology Risk Assessment		266,877
Peer Panel Costs		587,871
Reimbursements		200,000
Total		94,235,000

USDA-EPSCOR PROGRAM

Question. Ten percent of the competitive research grant funds are to be used for the USDA-EPSCOR program (Experimental Program to Stimulate Competitive Research). Please provide a list of eligible States and funding levels awarded under this program for each of the past two fiscal years and a list of the States that will be eligible for the program in fiscal year 1997.

Answer. Below is a table of funding for the USDA EPSCOR program:

NRI COMPETITIVE GRANTS PROGRAM FUNDING FOR USDA EPSCOR STATES

[Total funding for fiscal years 1995, 1996]

USDA EPSCOR States	Fiscal year—	
	1995	1996
Alaska	\$147,000	
Arkansas	1,112,080	\$1,279,862

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NRI COMPETITIVE GRANTS PROGRAM FUNDING FOR USDA EPSCOR STATES—Continued

[Total funding for fiscal years 1995, 1996]

USDA EPSCOR States	Fiscal year—	
	1995	1996
Connecticut	816,789	516,206
Delaware	1,187,004	682,628
Hawaii	665,000	87,212
Idaho	1,057,836	1,037,530
Maine	567,194	325,932
Mississippi	811,183	746,568
Montana	1,869,826	1,355,810
Nevada	906,923	116,283
New Hampshire	281,061	515,663
New Mexico	0	106,379
North Dakota	1,350,733	970,260
Rhode Island	253,500	882,688
South Carolina	825,641	733,009
South Dakota	468,083	714,523
Vermont	219,000	175,551
West Virginia	445,000	238,540
Wyoming	154,998	585,974
Total for States	13,138,851	11,070,618
U.S. Territories & Possessions		
District of Columbia	434,978	48,691
Puerto Rico		
Grand total	13,573,829	11,119,309

1997 USDA-EPSCOR STATES

For fiscal year 1997, the following states are eligible for the EPSCOR Program. In addition, all U.S. territories and possessions and the District of Columbia are eligible.

Alaska	Mississippi	South Carolina
Arkansas	Montana	South Dakota
Connecticut	Nevada	Utah
Delaware	New Hampshire	Vermont
Hawaii	New Mexico	West Virginia
Idaho	North Dakota	Wyoming
Maine	Rhode Island	

NATIONAL RESEARCH INITIATIVE

Question. Please summarize the major accomplishments of research funded through the NRI in each of the past five fiscal years.

Answer. The goal of the NRI is to support fundamental and mission-linked research of importance to agriculture. Over the past 5 years, the NRI has supported almost \$500 million in agricultural research. This research is designed to contribute to the knowledge base from which practical solutions can be made to the most pressing agricultural problems. Because the NRI has six major divisions and 27 program areas, it is difficult to describe all of the many scientific accomplishments. However, below are some general and specific accomplishments of the program:

General advancements:

Knowledge has been gained in the area of natural resources and the environment addressing contemporary issues of importance for agriculture and forestry and society as a whole. Biological systems, including humans, influence and are influenced by the environment. Further, the impact of environmental changes on the sustainability of agriculture and forestry, and the enhanced stewardship of natural resources and the minimization of negative environmental consequences, have been

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the subject of many grants. A strong scientific basis also is being sought for understanding the impact of potential global change.

The maintenance of human health is significantly affected by both the quality and quantity of the foods consumed by individuals. Research is supported which contributes to our understanding of the requirements of dietary components and factors which impact optimal human nutrition. Data generated from these studies and those conducted to better understand consumer attitudes and behavior toward food will be used for updating dietary recommendations, formulating national nutrition policy, and stimulating new developments by the food industry. Safety of food products is of paramount importance to the producer, processor, distributor, and consumer. In response to this need, food safety research has been supported emphasizing the detection, prevention and control of food-borne disease-causing microorganisms, naturally occurring toxicants and drug residues. Research on food safety is a Department-wide initiative which adds scientific validity to the HACCP Model.

Research across the broad scope of animal agriculture has been funded for achieving competitive and sustainable food and fiber production from animals. The critical need for a better understanding of the biology of animal production and performance necessitates a broad scientific approach that contributes to integrated food animal management systems. To accomplish this, both fundamental and mission-linked research have been supported that have the following goals: (a) enhancing reproductive efficiency; (b) improving animal growth and development; (c) identifying animal genetic mechanisms and mapping genes; and (d) sustaining animal health and well-being. Emphasis has been given to innovative approaches to research questions related to animals primarily raised for food or fiber. This includes aquaculture species and those animals such as horses that contribute significantly to the agricultural enterprise of the country.

Pests cause major damage each year to crops, forests, rangeland, and livestock. How well pests are controlled becomes a major limiting factor in the ability of the United States to produce, store, ship and trade food and other products of agriculture. Although vital to the sustainability of agriculture, pest control also can have negative effects. Environmental damage can occur in the form of chemical contamination due to pesticide use. Conversely, lack of pest control may create other environmental and human health problems. Fundamental knowledge has been gained to form the basis of novel pest management strategies for new or emerging pests or for replacement of obsolete pest management practices. Moreover, pest management of the future has been improved while simultaneously reducing our dependency on pesticides as one of many steps toward the goal of sustaining agriculture and our natural resources. Research conducted by NRI supports the Department's initiative to implement IPM practices on 75 percent of U.S. crop acreage by 2000.

Additional knowledge has been generated across a broad range of plant sciences critical to sustainable crop and forest productivity, and for addressing the environmental impacts of farming and forestry. For example, the ability to breed crop and forest species with specific desirable traits has been enhanced by knowledge of the location, behavior, and characteristics of plant genes. Plant development affects plant productivity and the quality of plant products. Knowledge of how plants obtain, use, or store energy and nutrients has been obtained and is essential for proper management of plant populations. Innovative research on plant systems has been supported in: (a) genomes, genetics, and diversity; (b) plant growth and development; and (c) energy and metabolism.

The economy and standard of living in the United States are increasingly dependent upon export market growth and the retention of domestic markets. This is especially true for the nation's rural areas long dependent upon the production and marketing of agricultural, aquacultural, and forest products. The research supported by NRI grants has generated a continuing stream of new knowledge on how to compete in the production and marketing of raw commodities and value-added products, stimulated economic development in rural areas, and developed production and processing practices to enhance the natural environment and standard of rural living.

Research to enhance the value and use of agricultural and forest products helps to maintain and strengthen U.S. agricultural and forest based industries. Expanded uses for agricultural and forest commodities, more efficient use of resources, more environmentally sound manufacturing processes, and greater economic competitiveness of U.S. produced goods are all resulting from NRI funded research. Opportunities exist for making new and better agricultural and forest products at all stages of product development and use, starting with understanding and improving the agricultural/forest resource base, production, harvest, storage, transportation, product formulation, processing and manufacturing, and understanding and optimizing end-

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use characteristics. Innovative research has been supported in: (a) value-added products research encompassing food and non-food characterization/process/product research and (b) improved utilization of wood and wood fiber.

Agriculture encompasses the system that produces, processes, and distributes food, fiber, and other products and services from the producer to the consumer. Agricultural systems also include aquaculture, forestry and a diversity of supporting natural resource elements such as soils, surface water, ground water, wildlife, and the atmosphere. In addition, human resources, institutions, and financial capital are needed to support and manage agricultural systems. It is the management of all these diverse and complex resources within a systems context that is critical to how well the agricultural system fulfills societal goals. Although agricultural research has most often focused on individual components of systems, the NRI has provided opportunities for integration of these components through a systems research program. The objective has been to obtain knowledge that is essential to sustain the viability of agriculture. Such research addresses directly interactions among the components that comprise agricultural systems. The NRI supports systems research that has the potential to aid in the development and/or evaluation of national, regional, community, and/or producer level practices and policies that will sustain: a safe and adequate supply of agricultural products and services; environmental quality and the natural resource base; human health; and the economic viability and quality of life of rural communities; and address linkages between urban and rural areas.

Specific Accomplishments:

Erwinia herbicola is a bacterial plant pathogen responsible for fruit russetting of pear trees. Researchers at the University of California at Berkeley studied the expression of a gene in this pathogen that is activated in dry environments, a condition quite common for bacteria growing on plants in the field. They found that this gene is inhibited in the presence of free ammonium ions when the bacteria are grown in culture. They tested these results in the field and found that the application of nitrogenous compounds, such as ammonium sulfate, at low rates near bloom is a simple and safe alternative to the use of chemical pesticides for the control of fruit russet.

Researchers at South Dakota State University have identified extracts of the noxious weed, leafy spurge that induce a strong aversive feeding response in laboratory rats. The extracted portion of leafy spurge is being characterized for chemicals that induce this aversive feeding reaction. Once such a chemical(s) is(are) identified, researchers may be able to alter leafy spurge such that cattle will graze on this noxious weed.

Porcine Reproductive and Respiratory Syndrome—PRRS—is caused by a virus that causes a disease identified by the National Pork Producers Council as the number one disease problem of swine. Based on an understanding of the biology of the virus—research funded by the NRI and the National Pork Producers Council—a vaccine was developed that prevents the disease. Investigators at South Dakota State University and the University of Minnesota have made a major contribution to the swine industry through this research.

In the summer of 1996, about 400,000 acres of Bt corn was grown in the U.S. Bt corn has a bacterial gene incorporated into the corn genome that produces a toxin extremely effective against the European Corn Borer. Estimates are that 3.4 million acres will be grown in 1997. Although this product is viewed as developed by industry, public research laid the groundwork for its development. The NRI has funded considerable work on *Bacillus thuringiensis* (1) for determining the way Bt toxin destroys its insect host so that the most effective Bt genes can be incorporated into the engineered plant, and (2) for understanding the biochemical and ecological basis of insect resistance to Bt so that resistance problems can be avoided or delayed with the engineered crop. Other NRI funding has allowed the molecular genetic mapping of corn leading to efficient means for crossing the transgene into various elite lines, documentation of the genetic behavior of tissue cultures facilitating the regeneration of corn plants with the Bt gene, etc.

The safe handling of food has been enhanced through NRI funded projects. One of the outcomes is the isolation of a protein—invisible when applied to food preparation surfaces such as cutting boards—that binds firmly to the surface but does not allow harmful bacteria to bind. If they do bind, the protein kills the cells. This product is called Nisin, developed by researchers at Oregon State University. The medical field is considering Nisin's value in treating mechanical devices used in medicine.

The take-all disease can wipe out whole fields on wheat in the U.S. as well as abroad. A few soils, called "suppressive soils", do not allow much growth of the fun-

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gus. USDA Agricultural Research Service scientists at Washington State University with NRI funding have found that certain strains of *Pseudomonas* bacteria found in suppressive soils prevent the growth of the take-all fungus. These scientists found that certain soil bacteria produce antibiotics—phenazines—that stop the growth of the fungus. The antibiotic has been isolated and characterized. These bacteria can be grown in a fermentor and applied as a seed coating like any other seed treatment, except this represents a biological control agent instead of chemical control. Another difference is that only the seed to be immediately planted is treated because otherwise the bacteria will die; an advantage is that only seed to be planted is treated. Currently, seed treated with chemicals and not planted must be disposed of and that can be a problem.

The Spider Lamb Syndrome—SLS—is a congenital skeletal defect controlled by a single recessive gene. Lambs that carry the gene in heterozygous condition—carriers—are perfectly normal—but matings between two carriers produce defective lambs in about 25 percent of the progeny. Knowing that breeding stock carries this gene reduces their value by about 70 percent. The gene is becoming more and more prevalent in the Suffolk and Hampshire breeds. In 1994, the NRI published a “Research Highlights” publication page indicating that research had been funded to discover a marker gene that might allow farmers to know when a ewe or ram carried the gene. In the ensuing years, a marker was found that would allow the identification of such carriers with 92 percent accuracy. Using the chromosome map position of this marker gene in sheep as a guide, a Utah State University researchers looked for the marker on the human molecular genetic map. At about the same distance from this marker gene as found between it and the SLS trait in sheep, the researchers noticed that a human trait had been mapped that also influenced skeletal development. Using the human gene as a probe onto the DNA from progeny segregating for the SLS, the researchers found that this gene was 100 percent associated with the trait. By this series of discoveries, we now have available not only a perfect molecular genetic tag to know when a lamb is a carrier, but the exact gene causing the biochemical defect is now known.

Several wild species of tomatoes produce seemingly worthless small— $\frac{1}{2}$ -inch diameter—green fruit. It is not surprising to find that these wild tomato species furnish genes for cold tolerance, virus resistance, insect resistance, and increased solids. What is surprising is that a Cornell University researcher, through NRI funding, found that these green tomatoes possess genes that will make our normal red tomato even redder. The researcher has found that the use of the molecular genetic map of tomato, also developed in part through NRI funding, allowed him to detect genes in the green wild tomato that have an effect directly opposite to what one would expect. The researcher also has found that these tiny fruited tomatoes have genes that will increase yield in our normally cultivated types.

Researchers at Purdue University have developed a system to use corn grits—ground corn kernels—to take the water out of ethanol produced from corn, a system now used to process 750 million gallons of ethanol per year at a significant cost savings over other methods. Through NRI support, the technology is being extended to new applications. For example, modified grits are being examined as a replacement for expensive inorganic desiccants in pressure swing dryers to provide dry air or other gases for use in paint spraying, ozone generation, and pressurization of power and communication cables. In addition, corn grits are being examined as a low-cost, natural desiccant for air conditioners based evaporative cooling; in this application, the grits can help displace ozone-depleting chlorofluorocarbons and tap into a \$26 billion global market.

Technology also can result from the USDA competitive grants program that has an impact on all of biology. A system has been developed for isolating and biologically purifying fragments of DNA that led to the “shotgun cloning” of DNA, declared as a revolution in DNA sequencing technology by many writers. The contribution of this research was in using the M13 bacteriophage to amplify specific DNA segments. The genome programs of today owe part of their success to this innovative strategy funded by USDA.

SPECIAL AND ADMINISTRATIVE GRANTS

Question. For each of the special research and administrative (research and extension) grants funded for fiscal year 1997, please indicate the following: a detailed description of the project funded; who is carrying out the research; federal and non-federal funding made available for the project to date, by fiscal year; and the anticipated completion date for the original objectives of the project and whether those objectives have been met; and the anticipated completion date of additional or relat-

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ed objectives. For each project, please indicate when the last agency evaluation of the project was conducted. Provide a summary of the last evaluation conducted.

Answer. The information follows.

AFLATOXIN RESEARCH, ILLINOIS

Past work on this problem has involved identifying corn germplasm resistant to aflatoxin, identifying *Asperigillus flavus*-inhibiting compounds, identifying fungus-inhibiting enzymes, developing transformation methods, and developing tissue culture/plant regeneration procedures. Aflatoxin are potent carcinogens with other toxic properties, and pose potential health risks wherever toxin-contaminated corn occurs. Aflatoxin contamination occurs frequently in the southeastern United States, but outbreaks have also occurred in the upper Midwest. Because there are significant needs for research and program implementation national interest areas such as the integrated pest management initiative, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research.

The original goal of this research was the reduction of aflatoxin production in corn. Recent accomplishments include identification of corn germplasm producing high levels of fungus-inhibiting enzymes, production of transformed corn plants, finding new sources of resistance, and developing advanced corn lines for hybrid production.

Grants have been awarded from funds appropriated as follows: fiscal year 1990, \$87,000; fiscal year 1991, \$131,000; and fiscal years 1992–1993, \$134,000 per year, fiscal year 1994, \$126,000; and fiscal years 1995, 1996, and 1997, \$113,000 per year. A total of \$951,000 has been appropriated.

The non-federal funds and sources provided for this grant are: \$21,251 university operating funds for project investigator salary and fringe benefits, and \$18,000 in corn seed company support.

This research is being conducted at the University of Illinois. The anticipated completion date for the original objectives was 1995. The original objectives have not been completely met. In other related work, the project leaders, working with collaborating corn breeders, anticipate providing the different sources of resistance to commercial seed companies for incorporation into high-yielding commercial hybrids within five to seven years. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

The last agency evaluation was in December 1996. In summary, the evaluation stated that the research techniques are consistent with high likelihood that specific objectives will be accomplished. There is a good balance between fundamental and applied research, which should foster the development of new, highly-desirable corn germplasm.

AGRICULTURAL DIVERSIFICATION AND SPECIALTY CROPS, HAWAII

The white taro project is in its final phase. Many of the processing obstacles have been overcome, flour is being produced in pilot-scale quantities, better taro food product formulations are coming out, and the project is ready to turn over to the private sector.

Due to demand conditions, the pineapple wet-pack processing project was changed to a high pressure minimal processing of tropical fruits. High pressure processing of tropical fruits provides a ready-to-eat chilled fresh product by adding value to fruit which can not meet fresh fruit quality standards and eliminating the fruit fly quarantine problem. Once the high pressure equipment arrives in February 1997, qualitative results should be out quickly. An agricultural business development handbook called, "This Hawaii Product Went to Market" was published. It contains 43 short chapters written by 46 people representing 26 companies and institutions in Hawaii. This book was necessary to help others with business initiation and expansion. A new taro production manual is nearing completion. Agribusiness interested in taro now have what all good agribusinesses need: a cost of production study, market reconnaissance information delivered by the project's newsletter, marketing tools developed in earlier phases of this project, and a production manual. Underlying all of this information is a business guide.

Hawaii's economy needs help to recover after the decline of sugar and pineapple in the state. Taro products would be one such avenue, albeit relatively small at the outset. These gluten-free products could be a staple to many people in the U.S. who suffer from food ingredient intolerance. In general, collaboration with the private sector is needed to evaluate the commercial potential of university-based work. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this

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grant. At the discretion of the state, Hatch Act or other funding could be used to support this research. The principal investigator believes this research to be of regional and local need.

The goal of the original proposal was to screen potential food and non-food crops for commercial development in Hawaii. As mentioned above, white taro emerged as one of the most promising opportunities and also offered the opportunity to develop an infrastructure that will help new crop ideas come on line even faster. Overall, the researchers have identified a need, people with food sensitivities; then identified a crop; figured out a mechanism to inexpensively process the crop into flour; worked with a private sector company to set-up a pilot-scale facility; developed the operating protocol for the facility; worked with local food processors to develop prototype products and have improved on them; and found some interested parties that might be willing to invest in the commercial version of this project. Currently, the University of Hawaii is working on handing-off the project to the private sector. The high pressure project is just getting off the ground because it took a long time to acquire the equipment.

Grants have been awarded from funds appropriated as follows: fiscal years 1988 and 1989, \$156,000 per year; fiscal years 1990 through 1993, \$154,000 per year; fiscal year 1994, \$145,000; fiscal years 1995 through 1997, \$131,000 per year. A total of \$1,634,000 has been appropriated.

The University of Hawaii provides in-kind support in the form of laboratory and office facilities, equipment and equipment maintenance and administrative support services: \$68,503 in fiscal year 1992; \$75,165 in fiscal year 1993; and \$74,663 in each fiscal year 1994–1997. In addition, nearly \$35,000 of in-kind support has come from private sector partners and \$30,000 is committed from the private sector on the high pressure minimal processing project.

Research is being conducted at the University of Hawaii's College of Tropical Agriculture and Human Resources, and on the Big Island of Hawaii. All taro-related work will be done by May 31, 1997 and all objectives will be met. The high pressure processing project will have a great deal of work done by May 31, 1998 but will need to be continued on private sector funds. In keeping with the Administration's policy of awarding research grants competitively, no further federal funding for this grant is requested. Research could be continued at the state's discretion using, formula funds.

The CSREES agency representative to this project meets with the University of Hawaii investigators at least twice each year to review progress and plan subsequent activities. This close interaction has led the project through a progression of steps from research discovery to near-term commercialization, and, in the case of high pressure processing, back to testing and development of a new technology for possible commercial use.

ALLIANCE FOR FOOD PROTECTION, NE, GA

The fiscal year 1997 appropriation supports the continuation of a collaborative alliance between the University of Georgia Center for Food Safety and Quality Enhancement and the University of Nebraska Department of Food Science and Technology. Fiscal year 1996 funds supported research at the University of Nebraska on the detection, identification and characterization of food allergens, the effects of processing on peanut allergens, and investigation of the efficacy of using various types of thermal processes to reduce or destroy the toxicity and mutagenicity of certain *Fusarium* metabolites in corn and corn products. Research at the University of Georgia was directed toward determining the foodborne significance of *Helicobacter pylori*, determining the fate of *Arcobacter* in foods and the effect of environmental factors on survival and growth, determining the efficacy of nisin and environmental factors on controlling *Bacillus cereus*, and developing a device to rapidly detect foodborne pathogens using immunomagnetic separation technology. The principal researcher believes the proposed research addresses emerging issues in food safety which have national, regional and local significance. Specifically, research will address bacterial pathogens that can cause ulcers, cancer and diarrheal illness and allergens in foods that cause serious reactions, including death, in sensitive people. These emerging issues affect consumers, the food industry, and food producers at all levels, national, state, and local. In view of significant needs for research in high priority national interest topics such as improved pest management systems and food safety, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research.

The original goal of this research was to: (1) facilitate the development and modification of food processing and preservation technologies to enhance the micro-

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biological and chemical safety of products as they reach the consumer and (2) develop new rapid and sensitive techniques for detecting pathogens and their toxins as well as toxic chemicals and allergens in foods. The University of Nebraska developed assays for the detection of milk and egg residues in processed foods, produced high-quality antibodies for soybean proteins, partially characterized sunflower seed, and soybean allergens, and developed a simple liquid chromatographic procedure for determination of moniliformis toxin. The University of Georgia developed a method to culture *Helicobacter pylori*, identified a treatment to prevent *Bacillus cereus* from producing toxin in refrigerated foods, determined survival and growth characteristics of *Arcobacter* and *Helicobacter pylori*, and determined the appropriate homogenization conditions to prepare food samples for rapid detection of pathogens by immunoseparation.

The work supported by this grant began in fiscal year 1996, and \$300,000 was appropriated in fiscal years 1996 and 1997, for a total appropriation of \$600,000. The nonfederal funds and sources provided for this grant were \$117,000 state funds and \$250,000 industry and miscellaneous in fiscal year 1996 and are expected to be \$141,000 state funds and \$175,000 industry and miscellaneous in fiscal year 1997.

Research will be conducted at the University of Georgia Center for Food Safety and Quality Enhancement in Griffin, Georgia and at the University of Nebraska Department of Food Science and Technology in Lincoln, Nebraska. The original objectives have not yet been met. The researchers anticipate that work will be completed on the original objectives in 1999. However, in keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using Hatch or other funds.

An agency science specialist conducts a merit review of the proposals submitted in support of the appropriation on an annual basis. A review of the proposal from the University of Nebraska was conducted on December 20, 1996, and good progress was demonstrated on the objectives undertaken to date as discussed above. A progress report from the University of Georgia was evaluated by the agency on January 16, 1997, and demonstrated good progress on its 1996 objectives.

ALTERNATIVE CROPS FOR ARID LANDS, TEXAS

This grant is to develop the two most abundant plants in southwestern United States, i.e. mesquite and cactus, into commercial crops through a combination of applied research and marl, et development. In Texas, New Mexico, Arizona and California these plants occupy 72 million acres. The semi-arid regions of the United States that border with Mexico in Texas, New Mexico, Arizona, and California have some of the highest unemployment rates, lowest economic returns per acre, and lowest incomes in the United States. The two most abundant plant species in this region are prickly pear cactus and mesquite. By working with Mexican researchers, this grant will help to stabilize the economic situation of rural poor in Mexico and the United States. There are few crops capable of being grown sustainably in these regions. Due to the nitrogen fixing capability, and thus soil improving properties, of mesquite and high water use efficiency of cactus, these plants contribute to sustainable agriculture, and will diversify southwestern agriculture. This research group is the only center in the United States developing these plants as crops. The principal researcher has been active with a national New Crops initiative supported by the Center for Agricultural Science and Technology (CAST) to develop grants programs for new feed/food from new crops. In view of the significant need for research in national priority areas, such as integrated pest management, additional funding for this Special Grant is not proposed. At the discretion of the State, Hatch Act or other funding could be used to support this effort.

The goal is to improve the economic returns, and year-to-year economic stability in the southwestern United States. Accomplishments have been sale of a new cactus vegetable variety in 100 stores of the largest retail grocery chain in Texas, presentations to architects in all major cities in Texas on mesquite technical qualities and all mesquite sawmill and furniture manufacturers, publication of 4 year field trials in which cactus was found to be the most efficient converter of water to dry matter of all plant types, a major collection of 130 fruit, forage and, vegetable varieties of cactus, 10 year non-irrigated pruning and spacing trial with mesquite found diameter growth rates greater than walnut and oak in the northeastern United States, and a sustainable system for mesquite management that avoids use of bulldozers and aerial herbicides by creating markets for mesquite products and utilizing mesquite's nitrogen fixing properties.

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Fiscal year 1994 was the first year of funding for this grant and \$94,000 was appropriated. In fiscal years 1995 through 1997, \$85,000 was appropriated each year. A total of \$349,000 has been appropriated. In fiscal year 1994, \$43,215, was provided by the Texas legislature.

The work is being conducted by Texas A&M University, Kingsville, Texas. Significant but small Texas cactus and mesquite industries now exist. Transformation of these small industries into medium industries and transfer of the and technologies to low rainfall areas of the Midwestern and southeastern United States will carry on 10 years into the next century. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

Evaluation of this project is conducted annually based on the annual progress report and discussions with the principal investigator, as appropriate. The review is conducted by the cognizant staff scientist who has determined that this research is in accordance with the mission of the agency.

ALTERNATIVE CROPS, NORTH DAKOTA

In this investigation of alternative crops, there are two main thrusts: the development and commercialization of novel new crops, and the differentiation of traditional crops. Both avenues of research have the shared goals of increasing biodiversity at the farm and field, while producing new crops and products for current and future societal needs. Some of these include (a) the development of crambe, flax, sunflower, safflower, and various rapeseeds as a renewable supply of industrial oil, (b) the study of products from amaranth, potatoes, sugarbeets, carrots, soybeans, barley, and sunflower for novel new uses in the paints, coatings, as food ingredients, and critical human nutrition markets, and (c) the development of new bio-chemical and enzymatic processes to refine and create super critical and other high-value fluids from oilseed crops which could serve as effective renewable replacements for industrial uses.

The principal researcher believes that nationally, developing new crops and new markets for agricultural products is critical for both environmental and economic reasons. Enhanced biodiversity that comes from the successful commercialization of new crops aids farmers in dealing with pests, reducing the dependency upon pesticides. New markets are needed to provide more economic stability for agricultural products, especially as federal price supports are gradually withdrawn. The development of new crops and products, offers a unique way to satisfy national goals of enhanced environmental quality, while at the same time opening new economic opportunities to farmers and other rural entrepreneurs. Regionally, the temperate areas of the Midwest have the potential to grow a great number of different crops, but are in need of publicly sponsored research efforts to reveal the most practical, efficient, and economical crops and products to pursue. This effort has forged a strong link with the private sector, and successfully spawned several crops and products into profitable private sector businesses. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research. The principal researcher believes this research to be of national, regional or local need.

The original goal of this research was to introduce, evaluate and test new crops which will broaden the economic diversity of crops grown in North Dakota. Over the past eight years, this special federal appropriation has been an important part of North Dakota State University's approach to research and development on agricultural alternatives. It has helped sponsor research on crambe, lupin, canola, safflower, cool-season grain legumes, buckwheat, amaranth, field pea production and utilization, transgenic sugar beets to produce levan, utilization and processing of lupin flour, confectionery sunflower production, and growing and marketing of carrots in North Dakota. It has helped develop a crop-derived red food dye and high quality pectin as food ingredients. It has sponsored research on innovative new bio-chemical means of splitting crop oils, and other new uses of oilseed crops. It has also helped develop markets for new crops as livestock and fish feeds. This appropriation has helped create both new knowledge and new wealth.

Appropriations by fiscal year are as follows: 1990, \$494,000; 1991, \$497,000; 1992 and 1993, \$700,000 per year; 1994, \$658,000 and in fiscal year 1995, \$592,000; and in 1996 and 1997, \$550,000 per year. A total of \$4,691,000 has been appropriated.

In fiscal year 1991, \$10,170 was provided by state appropriations. In fiscal year 1992, \$29,158, was also provided by state appropriations and self-generated funds. In fiscal year 1993, \$30,084, was provided by state appropriations. In fiscal year 1994, \$161,628 was provided by state funds, \$3,189 provided by industry and \$9,020

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provided by other sources, totalling \$174,417. In fiscal year 1995, \$370,618 was provided by state appropriations, \$1,496 provided by self-generated funds, \$1,581 provided by industry and \$5,970 was provided in other non-federal funds, totalling \$379,665 for fiscal year 1995. In fiscal year 1996 \$285,042 was provided by state appropriation, \$4,742 provided by industry, \$14,247 provided from other non-federal funds, totaling \$304,031 for 1996.

The work is conducted on the campus of North Dakota State University and at the Carrington Research and Extension Center, Carrington, North Dakota, and the Williston Research Center, which are both in North Dakota. Work is also done in eastern Montana.

Fiscal year 1997 is the eighth year of activity under this grant. The primary emphasis has been to find new crops with non-food uses and create value added products. The original objectives have been met. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

This project has been evaluated based on the annual progress report and agency participation in evaluating proposals submitted to the Agricultural Experiment Station under this grant. The cognizant staff scientist has reviewed the project and determined that the research is conducted in accordance with the mission of this agency.

ALTERNATIVE MARINE AND FRESHWATER SPECIES, MISSISSIPPI

The research has focused on the culture of hybrid striped bass, prawns, and crawfish. Nutritional requirements and alternative management strategies for these species have been evaluated and field tested. Utilization of improved technologies will enhance production efficiency and accelerate the use of these alternative species and alternative management strategies in commercial aquaculture. The principal researcher indicates that as the aquaculture industry continues to grow, it is extremely important to consider alternative species and production strategies for culture in order to help the industry diversify. Diversification is of benefit to both the producer and consumer of aquaculture products. In view of the significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research.

The original goal of this research was to develop and evaluate aquaculture production technologies that would lead to the use of alternative species and management strategies in commercial aquaculture production. Research evaluating stocking rates, nutritional requirements, and methods to reduce stress in hybrid striped bass production systems has led to the development of improved production efficiency in these systems. Recent research indicates that feed formulations for hybrid striped bass should be adjusted for seasonal fluctuations in temperature. Nutritional studies also indicate that the niacin requirement for striped bass may be much lower than previously reported. Field testing of alternative management strategies for crawfish indicates that the most efficient and cost effective production strategy involves the appropriate combination of stocking, feeding, and harvesting practices. In addition, researchers evaluating product quality of cryogenically frozen whole prawns indicate that prawns can be kept in frozen storage up to 7 months with no loss of quality.

The work supported by this grant began in fiscal year 1991 and the appropriation for fiscal years 1991-1993 has been \$275,000 per year, \$258,000 in 1994, and \$308,000 in fiscal years 1995-1997 each year. A total of \$2,007,000 has been appropriated.

The university reports a total of \$332,091 of non-federal funding to support research carried out under this program for fiscal years 1991-1994, \$70,636 in fiscal year 1995 and \$79,935 in fiscal year 1996. The primary source of the non-federal funding was from state sources.

Research is being conducted at Mississippi State University. The original specific research objectives were to be completed in 1994. These specific research objectives have been met, however, the broader research objectives of the program are still being addressed. The specific research outlined in the current proposal will be completed in fiscal year 1998. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using other funds.

The agency evaluates the progress of this project on an annual basis. The university is required to submit an accomplishment report when the new grant proposal is submitted to CSREES for funding. The 1996 review indicated that the research

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addresses an important opportunity in the aquaculture industry, that progress on previous research was well documented, and that the proposed research builds on the previous work funded through this program.

ANIMAL SCIENCE FOOD SAFETY CONSORTIUM

The research goal of the consortium has been to enhance the safety of red meat and poultry products for human consumption. Research has focused on accomplishing six objectives (1) develop rapid detection techniques for pathogenic bacteria and toxic chemicals for use by the red meat and poultry production-marketing system; (2) devise a statistical framework from which to develop tolerance levels for these hazardous substances; (3) identify effective interdiction points and develop methods to prevent or reduce substance presence; (4) develop monitoring techniques and methodologies to detect and estimate the human health risk of these contaminants; (5) develop technologies to reduce hazards and enhance quality of animal food products to complement the development of Hazard Analysis Critical Control Point [HACCP] programs by the Department's Food Safety and Inspection Service; and (6) estimate benefits and costs and risks associated with interdiction alternatives. The consortium's researchers have focused their efforts primarily on the first, third, fifth, and sixth objectives.

The principal researchers believe a safer national meat product food supply could reduce large economic losses, they estimate \$4 to \$7 billion a year, as a result of lost productivity and wages and medical treatment of victims of food-borne illnesses, in addition to reducing the human suffering and loss of life that occur every year as a result of these illnesses. Safer products could also find greater acceptance in global markets and, therefore, could contribute to increased meat product exports and rural economic growth. In view of significant needs for research in high priority national interest topics such as improved pest management systems and food safety, funds are not proposed to continue this Special Research Grant. However, the fiscal year 1998 President's Budget requests \$2 million for a competitively-awarded food safety program. The principal researchers could submit a proposal to this new program if it is funded. Also, at the discretion of the State, Hatch Act or other funding could be used to support this research.

The goal is to develop detection, prevention, and monitoring techniques that will reduce or eliminate the presence of food borne pathogens and toxic substances from the Nation's red meat and poultry supplies. The consortium is organized and operated along institutional lines with a coordinator and directors managing the research program. Advisory and technical committees consist of outside representation and provide advice on research planning and expertise on technical matters.

Major accomplishments this past year by the University of Arkansas include showing that young infants and children are more likely to be infected with *Salmonella* by caretakers than through food consumption, developing a technique to distinguish strains of *Salmonella* that are epidemiologically related, discovering anti-microbial bacteriocin with potentially broad application in the food system, and testing a process for mechanically stripping meat from poultry carcasses which may reduce microbiological contamination. Researchers have also developed a research oven which is leading to valuable models for cooking processes that kill pathogens while retaining quality of cooked poultry. They have also found that certain enzyme linked immunosorbent assays for *Listeria monocytogenes* may not be as useful in detecting these pathogens in cooked food products as on uncooked products. An experimental system for detection of *Salmonella typhimurium* organisms in pure culture has been developed which is based on immunomagnetic, immunofluorescent staining and image analysis which results in a significant reduction in time for analysis. Intervention techniques have been shown to aid in the reduction of bacterial populations as an integral component in successful HACCP program implementation.

Major accomplishments this past year at Iowa State University include development of rapid detection methods for foodborne pathogens in live swine and on pork products, intervention approaches at production and processing levels to enhance product safety, and assessment of health risks from pathogens which may be borne by pork or pork products. Specifics include the application of polymerase chain reaction technology to detect and differentiate *Campylobacter jejuni* and the more prevalent *Campylobacter coli* in pork, effective application of enzyme-linked immunosorbent assays to identification of antibodies against prevalent *Salmonella* species in swine sera and pork meat extracts, and development of a reliable culture test for rapid detection and differentiation of coliform and *E coli* bacteria. Effectiveness of a new vaccine for *Salmonella* developed with partial sponsorship of the Consortium has been assessed in laboratory experimentation and field experience. Research found that bacteria are readily inactivated by practical levels of irradiation

but viruses, especially the small RNA viruses were quite resistant to irradiation and were not sensitized to low heat treatment which would be sublethal to non-irradiated contaminated pork. Willingness to pay for irradiated pork or chicken was 10–30 percent above non-irradiated products in customer market tests. Risk assessment studies on food borne pathogens placed public health impact from pork at high level for no pathogens, at moderate level for *Salmonella*, *Yersinia*, *Clostridium*, and *Staphylococcus*, and at low to negligible level for all other potential pork borne pathogens.

Kansas State University has demonstrated under commercial conditions that electronic identification systems to track and determine contamination points for beef cattle are feasible from an implant retention, operational, and retrievability standpoint; developed analytical procedures to detect mycotoxin and organophosphate pesticide contaminants in animal tissue; demonstrated optimum carcass washing and trimming practices supplemental treatments of carcasses and cuts after final handling to be effective in the removal of pathogens; and demonstrated the efficacy of steam pasteurization and steam vacuuming in eliminating pathogenic bacteria from beef carcasses. University researchers have also determined that low dose irradiation is a viable intervention technology with minimal effects on beef quality; demonstrated that processing protocols for large diameter Lebanon bologna are sufficient to control *E coli* 0157:H7; determined that monitoring endpoint cooking temperature of ground beef patties or following a prescribed time/temperature interaction known to achieve a given endpoint are the safest ways to prevent consumption of undercooked ground beef, and developed technology to enhance growth of pathogenic bacteria so they can be rapidly detected at very low but potentially hazardous levels.

Grants have been awarded from funds appropriated as follows: fiscal year 1989, \$1,400,000; fiscal year 1990, \$1,678,000; fiscal year 1991, \$1,845,000; fiscal years 1992–1993, \$1,942,000 per year; fiscal year 1994, \$1,825,000; fiscal years 1995–1996, \$1,743,000 each year; and fiscal year 1997, \$1,690,000. A total of \$15,808,000 has been appropriated.

The non-federal funds and sources provided for this grant are as follows: \$1,313,653 State appropriations, \$2,959 product sales, \$35,600 industry, and \$259,735 miscellaneous for a total of \$1,611,947 in 1991; \$1,270,835 State appropriations, \$10,129 product sales, \$90,505 industry, and \$267,590 miscellaneous for a total of \$1,639,059 in 1992; \$1,334,680 State appropriations, \$1,365 product sales, \$33,800 industry, and \$356,308 miscellaneous for a total of \$1,726,153 in 1993; \$1,911,389 State appropriations, \$192,834 industry, and \$200,000 miscellaneous for a total of \$2,304,223 in 1994; \$1,761,290 State appropriations, \$221,970 industry, and \$91,885 miscellaneous for a total of \$2,075,145 in 1995; \$2,643,666 State appropriations and \$152,431 industry, for a total of \$2,796,097 in 1996; and \$1,508,112 State appropriations, \$638,172 industry, and \$129,753 product sales, for a total of \$2,276,037 in 1997. Thus, from 1991 through 1997 a total of \$14,428,661 in non-federal funds was provided.

Research is being conducted at the University of Arkansas at Fayetteville, the University of Arkansas for Medical Sciences at Little Rock, Arkansas Children's Hospital, Iowa State University, and Kansas State University.

The current program of research outlined under the Consortium's revised strategic research plan should be completed in 1999. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. However, the fiscal year 1998 President's Budget requests \$2 million for a competitively-awarded food safety program. The principal researchers could submit a proposal to this new program, if funded. Also, at the discretion of the State, Hatch Act or other funds could be used to support this research. An agency science specialist evaluates the progress of this project on an annual basis.

APPLE FIRE BLIGHT, MICHIGAN AND NEW YORK

This project studies fire blight in apple trees, which is a disease that can kill fruit spurs, branches, and whole trees. The research supported under this project will help develop fire blight resistant varieties, evaluate biological and chemical controls, and develop an education and extension component. Fire blight disease is caused by bacteria and affects apple trees in all apples growing areas of the nation. In the northeast, the disease is more prevalent because of humid weather conditions. The management of this disease is difficult because only one antibiotic treatment is available. Because there are significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act

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or other funding could be used to support this research. The principal researcher believes this research to be of national, regional, and local need.

The objectives are to develop transgenic apple trees through various molecular technologies, to develop new approaches to antibiotic treatment of the disease, to develop an early screening technique for tree sensitivity to the disease, to evaluate biological and cultural controls and to develop and improve education and extension components of disease management.

Fiscal year 1997 was the first year funds were appropriated for this grant. A total of \$325,000 was appropriated. The proposed non-federal funds for 1997 for the Michigan proposal are estimated for state appropriated matching at \$20,127 in salaries and \$20,000 miscellaneous whereas New York is estimating state appropriated funds at \$104,166 for 1997.

Research will be conducted at Michigan State University and Cornell University, New York Experiment Station. The anticipated date of completion of the projects is in fiscal year 1998. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

The projects underwent merit reviews in January 1997. The objectives outlined in the proposal appear to be satisfactory to meet the goals.

AQUACULTURE, ILLINOIS

Researchers are developing and evaluating closed system technology for application to commercial aquaculture. System design and cost of production analysis for these systems have been conducted in commercial trials and pilot studies. The principal researcher believes the development of alternative aquaculture production systems, such as closed recirculating systems, would reduce demands for water and would provide for greater control over production in aquacultural systems. Closed systems could be established independent of climatic condition in any region of the country. These systems also offer greater opportunity to manage aquacultural waste and reduce environmental impact. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research.

The goal of this program is to develop closed recirculating aquacultural systems in order to lower production cost, improve product quality, and reduce the potential environmental impact of aquacultural production systems. An analysis of production costs and risk factors has been conducted on a new system design and on commercial systems in cooperation with the private sector. Best management practices have been developed for these systems. Solid waste management techniques are also being evaluated.

The work supported by this grant began in fiscal year 1992. The appropriation for fiscal years 1992-1993 was \$200,000 per year; fiscal year 1994, \$188,000; and fiscal years 1995-1997, \$169,000 each year. A total of \$1,095,000 has been appropriated.

The university estimates that non-federal funding for this program is as follows: in fiscal year 1992, \$370,000; in fiscal year 1993, \$126,389; in fiscal year 1994, \$191,789; in fiscal year 1995, \$152,682; and in fiscal year 1996, \$171,970. The primary source of funding is from the state with gifts and grants accounting for the remainder. This estimate does not include substantial in-kind contributions from industry as this program conducts cooperative research with commercial producers.

Research is being conducted at Illinois State University at Normal, Illinois, through a subcontract with the University of Illinois. The original objectives were to be completed in fiscal year 1995. The original specific objectives have been met. The specific research outlined in the current proposal will be completed in fiscal year 1997. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

The agency evaluates the progress of this project on an annual basis. The university is required to provide an accomplishment report each year when the new grant proposal is submitted to CSREES for funding. The 1996 review of the project indicated that the project has met stated objectives.

AQUACULTURE, LOUISIANA

Research has focused on catfish, crawfish, reddish, and hybrid striped bass in commercial aquaculture. Research has included basic and applied research in the areas of production systems, genetics, aquatic animal health, nutrition, and product quality. The principal researcher indicates that there is a need to improve production efficiency for a number of important aquaculture species such as catfish, crawfish, hybrid striped bass, and reddish in order to enhance the profitability and sus-

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tainability of the aquaculture industry in the region. The research also addresses the issue of food safety and the quality of farm-raised products. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act, or other funding could be used to support this research.

The original goal of this research was to expand the technology base to enhance the development of aquaculture through a broad research program that addresses the needs of the industry. The university has completed studies in the area of fish nutrition, fish health, production management strategies, alternative species, seafood processing and broodstock development. Research has led to improved feed formulations, improved production strategies for crawfish, and improved processing technologies for aquaculture products.

Research to be conducted under this program will continue research initiated under the Aquaculture General program in fiscal years 1988 through 1991. The work supported by this new grant category began in fiscal year 1992 and the appropriation for fiscal years 1992-1993 was \$390,000 per year, \$367,000 in fiscal year 1994, and \$330,000 in fiscal years 1995-1997 each year, for a total of \$2,137,000.

The university estimates that non-federal funding for this program is as follows: in fiscal year 1991, \$310,051; in fiscal year 1992, \$266,857; in fiscal year 1993, \$249,320; in fiscal year 1994, \$188,816; in fiscal year 1995, \$159,810; and in fiscal year 1996, \$150,104. The primary source of this funding is from state sources with minor contributions from industry and other non-federal sources.

Research is being conducted at Louisiana State University. The original specific objectives were to be completed in 1990. These specific research objectives have been met. The specific research outlined in the current proposal will be completed in fiscal year 1998. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

The agency evaluates the progress of this project on an annual basis. The university is required to provide an accomplishment report each year when the new grant proposal is submitted to CSREES for funding. In addition, the CSREES program manager made a site visit in 1996 to meet with the scientists involved in the project and review the progress of the research. The 1996 review of the project indicated that the research is addressing important research needs of the aquaculture industry, the proposed research represented a logical progression of research previously funded through this program, and that the progress on previous research funded under this program is well documented.

AQUACULTURE RESEARCH, STONEVILLE, MISSISSIPPI

The primary objectives of this research have been to improve practical feeds and feeding strategies and improve water quality in channel catfish ponds. Additionally, scientists are evaluating the application of acoustical instrumentation in commercial aquaculture. The principal researcher indicates that the research findings from this project have a direct impact on the profitability and sustainability of a significant segment of the domestic aquaculture industry. The farm-raised catfish industry accounts for over 55 percent of the total U.S. aquaculture industry. Research funded in this program is directed towards two of the most important research needs of the industry; water quality and improved feeds and feeding strategies. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research.

The original goal of this research was to address the research needs of the catfish industry in the areas of water quality and nutrition. The research has led to improved water quality management practices in commercial catfish ponds. Research in the area of catfish nutrition has led to improved diet formulation and feeding strategies that have been widely adopted by the industry. Scientists are currently evaluating five protein levels under two different feeding regimes using conditions that closely reflect commercial catfish ponds. Studies evaluating acoustical instrumentation have demonstrated possible applications in commercial aquaculture. Researchers are determining the accuracy and effectiveness of upgraded and calibrated acoustical monitoring equipment.

Grants have been awarded from funds appropriated as follows: fiscal years 1980-81, \$150,000 per year; fiscal year 1982, \$240,000; fiscal year 1983-84, \$270,000 per year; fiscal year 1985, \$420,000; fiscal years 1986-87, \$400,000 per year; fiscal year 1988, \$500,000; fiscal year 1989, \$588,000; fiscal year 1990, \$581,000; fiscal year 1991, \$600,000; fiscal years 1992-1993, \$700,000 per year; fiscal year 1994,

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\$658,000; and fiscal years 1995–1997, \$592,000 each year. A total of \$8,403,000 has been appropriated.

The university estimates a total of \$2,101,508 in non-federal funding to support this research for fiscal years 1991–1994; \$1,128,451 in fiscal year 1995; and \$601,473 in fiscal year 1996. The primary source of non-federal funding is from the state. Additional funding is provided from product sales, industry contributions, and other miscellaneous sources.

The grants have been awarded to the Mississippi Agricultural Experiment Station. All research is conducted at the Delta Branch Experiment Station, Stoneville, Mississippi. The acoustical research in aquaculture will be conducted in cooperation with the National Center for Physical Acoustics at the University of Mississippi. The anticipated completion date for the specific original research objectives was 1984. These specific research objectives have been met, however, the broader research objectives of the program are still being addressed. The specific research outlined in the current proposal will be completed in December 1997. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula or other funds.

The agency evaluates the progress of this project on an annual basis. The university is required to provide an accomplishment report when the new proposal is submitted to CSREES for funding. The 1996 review indicated that the research addresses important opportunities in the farm raised catfish industry, significant progress has been reported on specific research objectives, and that the scientists involved in the project are leading authorities in this area of research.

AQUACULTURE, NORTH CAROLINA

CSREES has requested the university to submit a grant proposal that has not been received. The researchers indicate that the research will focus on reducing the environmental impact of aquaculture systems, reducing the impact of diseases in cultured finfish, and reducing the inherent risk of culturing emerging species. The principal researcher indicates that there is a need to reduce the environmental impact of aquaculture systems, to enhance fish health management strategies, and to reduce the impediments to culture selected emerging species. Improved environmental quality and improved production efficiency in aquacultural systems could have regional and national impacts. Diversification of the industry in terms of species cultured is of benefit to both the producer and consumer of aquaculture products. In view of the significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research. The principal researcher believes this research to be of national, regional or local needs.

The goals of the research are to reduce environmental impacts of aquaculture systems by improved system design and improved feeding strategies, to evaluate the efficacy of current vaccination methods and develop improved methods for vaccine administration, and to develop culture techniques for potentially important aquaculture species.

The work supported by this grant began in fiscal year 1997 and the appropriation for fiscal year 1997 is \$150,000. The university reports a total of \$94,000 of non-federal funding to support research carried under this program for fiscal year 1997. The primary source of the nonfederal funding was from state sources.

Research is being conducted at North Carolina State University. This is the first year of the project. The researchers anticipate that the specific research objectives will be completed in 1999. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

The agency will conduct the initial review of this proposal when it is submitted to CSREES for funding. Since this is the first year of the program, the proposal will be externally peer reviewed as part of the CSREES evaluation.

BABCOCK INSTITUTE FOR INTERNATIONAL DAIRY RESEARCH AND DEVELOPMENT

The Babcock Institute for International Dairy Research and Development was established with participation of the University of Wisconsin-Madison College of Agriculture and Life Sciences, School of Veterinary Medicine and the Cooperative Extension Division. The objective of the Babcock Institute is to link the U.S. dairy industry with the rest of the world through degree training, continuing education, technology transfer, adaptive research, scientific collaboration and market analysis. The principal researcher believes the need is to strengthen dairy industries around the world, to enhance international commercial and scientific collaborative opportunities

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for the U.S. dairy industry, and to draw upon global perspectives to build insight into the strategic planning of the U.S. dairy industry. Because of the significant need for research in high priority national topics, such as the Department's Pest Management Initiative, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research.

The goal of the Institute remains the linkage of the U.S. dairy industry with the rest of the world through training, continuing education and outreach, technology transfer, adaptive research, scientific collaboration and market analysis. Initial efforts were focused on planning and staffing. An initial activity was, and continues to be, the development of multi language extension materials about basic management techniques essential to optimize performance of U.S. germplasm overseas. This activity has grown to include manuals on Breeding and Genetics, Lactation and Milking, and Basic Dairy Farm Financial Management published in English, Spanish, French, Russian, and Chinese. Research on potential implications of NAFTA and GATT on the U.S. dairy industry was completed. A technical workshop on dairy grazing in New Zealand and the Midwest was organized and held in Madison during the fall of 1993. A technical workshop on Nutrient Management, Manure and the Dairy Industry: European Perspectives and Wisconsin's Challenges was held in Madison, Wisconsin during September 1994. A round table was held in January 1995 addressing "World Dairy Markets in the Post-GATT Era." Funding from this project also supported the Great Lakes Dairy Sheep Symposium in 1995 and 1996, and created a World Wide Web site in 1996 for distribution of Babcock Institute technical dairy fact sheets in four languages. The first International Dairy Short Course for a group of producers and technicians from Argentina has been organized on the University of Wisconsin Campus. Scientist's are being supported in collaborative research with New Zealand primarily to gain a better understanding of grazing systems as related to dairy management.

Grants have been awarded from funds appropriated as follows: fiscal years 1992 and 1993, \$75,000 per year; fiscal year 1994, \$250,000; and fiscal years 1995-1997, \$312,000 per year. A total of \$1,336,000 has been appropriated.

During fiscal year 1992, \$13,145 of State funds were used to support this program and \$19,745 of State funds in fiscal year 1993 for a total of \$32,890 during the first two years of this research. Information is not available for fiscal year 1994-1996.

Research is being conducted at the University of Wisconsin-Madison College of Agriculture and Life Sciences. The Babcock Institute's overarching mission has been to link the U.S. dairy industry and its trade potential with overseas dairy industries and markets. The original objectives of this project have remained consistent over the years. However, each year specific objectives were proposed to further the mission of the Institute and to build on previous accomplishments. The Institute has accomplished specific objectives each year in a timely manner. This objective remains of increasing importance with continued development of international markets for dairy products and technologies. The University researchers anticipate that work currently in progress will be completed by September 1998. In keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

The Babcock Institute undergoes two independent review processes each year. The first is done by a committee of university and industry representatives who review the annual research proposal and amend it prior to submission to the agency. The annual proposal is reviewed by agency technical staff prior to approval for fund release. In addition, the institute was included in a comprehensive review of the programs of the Department of Dairy Science at the University of Wisconsin in May 1995. The agency project officer has conducted two on-site reviews of the institute since its formation in 1992. The most recent review has found that the approach proposed by the researchers is appropriate and that the researchers are well qualified to perform the objectives as stated.

BARLEY FEED FOR RANGELAND CATTLE, MONTANA

This project will support research on the nutritional value of barley cultivars as feed for beef cattle. This effort will assist with the breeding and selection of superior types that can be more competitive with other feed grains and improve farmer income from barley crops grown in rotational systems in the Northern Great Plains. Barley as a feed grain is grown extensively in the United States. Based on chemical analyses and the experience of some cattle feeders the principal researcher believes it should have a feed value on par with corn and wheat. However, it is listed as inferior to both in feeds hand books and is therefore discounted in the market. Comprehensive feeding studies of various barley types will be conducted to document the

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value as a feed grain for beef cattle. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research. The principal researcher believes this research to be of national, regional or local need. The original goal of this research was to determine the true feed value of barley for feeder cattle, and thereby improve the economic return to barley production.

The work supported by this grant began in fiscal year 1996 with an appropriation of \$250,000. For fiscal year 1997, the appropriation is \$500,000. The total appropriation is \$750,000. The Montana State Agricultural Experiment Station is estimated to provide \$30,000 in staff time and operational funds toward this project. The Principal investigator has generated an additional \$130,000 of grant funding to support the work.

Research will be conducted at Montana State University. The project is proposed for completion following fiscal year 2001. Progress toward the objectives have been reported by the principal researcher. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula funds.

The project was peer reviewed in 1996 and judged to be scientifically sound and appropriate for the stated objectives.

BINATIONAL AGRICULTURAL RESEARCH AND DEVELOPMENT PROGRAM

The Binational Agricultural Research and Development (BARD) Program is a competitive research grants program that supports fundamental research in areas of animal and plant sciences, economics, and engineering, that is important to both U.S. and Israel agriculture. Each application for funding must be a joint effort put forward by a team of U.S. and Israel scientists. The requests for proposals for the 1997 competition was released in the fall of 1996. The proposals received are currently under review and funding decisions are expected to be completed by May 1997. The funds available through the BARD Special Research Grants Program are used to support the U. S. portion of approximately twenty joint U. S./Israel proposals each year. All proposals awarded by the BARD program must have significance to both U.S. and Israel agriculture. Thus, applicants must justify the work in terms of its global significance in order to receive funding. Fundamental research supported by the program provides the knowledge base needed to develop solutions to pressing agricultural problems in both nations.

The goal of the BARD program is to support fundamental research in plant and animal sciences, economics, and engineering that are important to both U.S. and Israel agriculture. In that, the generation of new knowledge is an ongoing process, the original goal of the BARD program to produce new knowledge continues today. Much of the research supported concentrates on issues of animal and plant health (including studies of the pests and pathogens of both plants and animals), and responses of plants to environmental conditions (particularly crops grown in warm, dry climates). Many accomplishments in fundamental sciences have been made in these areas that will lead to the development of crop plants resistant to disease, pests, and harsh environmental conditions; reduction in livestock diseases; and increased livestock production.

An agreement between the U.S. and Israel governments to establish BARD was signed in 1977, and an initial endowment fund of \$80 million was established through equal contributions from both countries.¹ Funds for BARD were available from the interest earned from the endowment fund, but a reduction in interest rates and increased research costs over the years impeded the ability of the BARD program to adequately meet the research needs of each country's producers and consumers. In fiscal year 1994, the Department directed that \$2.5 million of funding appropriated for CSREES' National Research Initiative (NRI) program be used for the BARD program to supplement the interest earned from the endowment fund, and that amount was matched by Israel. In fiscal year 1995, Congressional language directed that CSREES again use \$2.5 million of the NRI appropriation for BARD, and in fiscal year 1996, the Department directed that a third \$2.5 million increment of NRI appropriations be used for BARD. CSREES has received a direct appropriation in the amount of \$2 million for BARD in fiscal year 1997.

Each BARD grant funded by CSREES is for the U.S. portion of a joint U.S./Israel project. The Israeli portion of the joint project is supported from either the endowment fund or from supplemental funds provided by Israel. Israel matches the sup-

¹ Subsequent increase of \$30 million to current total of \$110 million.

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plemental funds provided by CSREES. Therefore, a significant portion of each project is supported with non-federal funds.

BARD is an ongoing program designed to support fundamental science of importance to agriculture. Each year new projects are supported through the competitive process. Therefore, new objectives are set forth each year through the support of new and innovative proposals. Each proposal is funded for two to three years.

Each proposal submitted to the BARD program receives a peer review evaluation. Only those proposals which review favorably are funded. CSREES has not conducted an overarching evaluation of the BARD program. However, the BARD program has an administrative council that is chaired by the ARS administrator. The council is responsible for providing advice as to content and policies of the BARD program.

BIODIESEL RESEARCH, MISSOURI

Research on biodiesel involves examining the feasibility of producing biodiesel and other higher value products from oilseed crops including soybeans, canola, sunflower and industrial rapeseed. It also involves identifying and evaluating potential markets for the fuel and other products. An important thrust is to identify how biodiesel and other environmentally-friendly products can help meet state and federal environmental mandates of reduced air and water pollution. The project is also evaluating local processing plants whereby farmers could produce crops, process the crops locally and use the fuel and high protein feed coproducts on their farms or locally. The initial work is being done in Missouri. The results may provide the agricultural community with alternative crops and more diverse markets, additional marketable products and a locally grown source of fuel. This may result in increased investment in local communities, additional jobs, and increased value added in the farm and rural community sectors. The principal investigator believes this research to be of local, regional and national importance. However, in view of the significant need for research of high-priority national scope, such as integrated pest management, additional funding for this project is not proposed. At the discretion of the State, this effort could be supported with Hatch Act or other funding.

The goals were to examine the feasibility of producing biodiesel and other higher value products from oilseed crops, plus to increase the value of coproducts. Results indicate that biodiesel can be produced most economically from soybeans, primarily because of the high value of soybean meal. Research indicates that with a community based biodiesel processing plant, costs of production could be as low as \$0.59 per gallon, although farmers might increase revenues by selling the soybean oil rather than using it to produce biodiesel. Since small quantities of biodiesel regularly sell for \$4.00 to \$9.00 per gallon, the structure of the production, marketing and transportation is currently under evaluation to identify more efficient and less costly ways to produce and market biodiesel. Also, a study of which markets might provide the best opportunity to use increased levels of biodiesel is underway. Such markets might include underground mining and the marine industry in addition to urban mass transit systems and cities having problems meeting more stringent air quality mandates. Research results indicate that for each one million gallons of biodiesel used in a B20 blend (20 percent biodiesel and 80 percent petroleum-based diesel) by the Kansas City, Missouri, transit fleet would have the following estimated impacts: almost 100 additional jobs; increased investment of \$500,000; net increase in personal income of \$3.2 million; and increase in total economic activity in the region of \$9.6 million. Research has also identified that rapeseed meal compares favorably to soybean meal and blood meal as an animal feed. It has a higher escape protein value than soybean meal. This research is carried out in close cooperation and coordination with other state and federal agencies, plus trade associations such as the National Biodiesel Board, the United Soybean Board, American Soybean Association, and others.

The work began by this program began in fiscal 1993, and the appropriation for that year was \$50,000. The appropriation for 1994 was \$141,000; and for fiscal years 1995 through 1997 was \$152,000 annually. A total of \$647,000 has been appropriated.

The source of non-federal funds is state appropriated funds. The level in 1994 was \$7,310. The funding level in 1995 was \$74,854. Additionally, some work funded by this grant has been conducted in cooperation with the National Biodiesel Board, plus the Missouri Soybean Merchandising Council. The level of those matching funds for these two sources are not available.

The work is being carried out at the University of Missouri-Columbia. The principals estimate that the work with biodiesel will require an additional two years to complete. Additionally, the work on higher value products, such as solvents from

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biodiesel, is expected to be on-going. Successes with the higher value products will help make bio-based business more profitable, thus increasing chances for success which will result in more value added opportunities for farmers and rural communities. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

The CSREES agency scientist reviews the annual proposal submissions to evaluate progress to date.

BIOTECHNOLOGY, OREGON

Research that has been funded under the Biotechnology Oregon project includes the use of nematodes for biocontrol of insect pests; development of bacterial vectors for vaccines and food additives; resistance to crown gall disease in plants; enhancement of anthocyanin pigments in plants, and enzymes for degrading lignin and wood waste. The principal researcher believes the research funding is requested to enhance the biotechnology research infrastructure in basic and applied biotechnology within the cooperating institutions, Oregon State University, the University of Oregon, and the Oregon Graduate Institute of Science and Technology. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research, including IPM competitive grant and emerging pest and disease funds.

The goal of the program is to improve the biotechnology research infrastructure, to foster research discoveries, and to develop technologies that lead to agricultural applications. Preference is given to research that has the potential for commercial development in the near future and that has the potential for additional funding from other sources. Five research projects in the areas mentioned above were funded under the grant in 1996.

The work supported by this grant began in fiscal year 1996, and the appropriation for fiscal year 1996 was \$217,000, and for fiscal year 1997 is \$250,000. A total of \$467,000 has been appropriated. In fiscal year 1995, the State of Oregon appropriated \$1,226,706 for biotechnology research at Oregon State University. For fiscal year 1996, non-federal support amounted to \$303,100, mostly from the private sector.

The research is being carried out at three cooperating institutions, Oregon State University, the University of Oregon, and the Oregon Graduate Institute of Science and Technology. Both the overall grant and the individual research projects funded under it are funded on a two-year basis. The Biotechnology Oregon grant was first awarded in 1996 and the anticipated completion date is July 31, 1998. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula or other funds.

The agency has not yet received the Biotechnology Oregon proposal for fiscal year 1997. The project was last evaluated for scientific merit by a Peer Review Panel in the spring of 1996. The Panel recommended approval without change in the research approach and plans.

BROOM SNAKEWEED

Current research addresses several areas for broom snakeweed control, including efforts to understand more fully the onset of invasion and persistence of broom snakeweed, evaluate the toxicology and physiological effects of broom snakeweed on livestock, and develop an integrated weed management approach for broom snakeweed. Broom snakeweed is a serious weed in the southwestern United States and adjacent Western States. About 22 percent of rangeland in Texas, and 60 percent in New Mexico is infested to some degree by the weed. Current cost for control of broom snakeweed in the southwestern United States is estimated at over \$41 million. Dense broom snakeweed stands cause significant economic losses in the plains, prairie and desert areas of the central and southwestern United States. Snakeweed is a poisonous plant causing death and abortion in livestock and reduced productivity of associated vegetation. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research.

Ground surveys have been conducted statewide from 1989 to map snakeweed distribution and relative density patterns throughout every county in New Mexico. This project is in its fourth research year. A Geographic Information System [GIS] approach is used to relate snakeweed populations to plant communities and soil

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type in areas where snakeweed is particularly dense. Research is addressing three general areas which are, first, ecology and management; second, biological control studies; and third, toxicology and animal health research. A considerable amount of useful research and practical application has resulted from this special grant. As an example, in biological control, several plant pathogens and insects are proving to be effective in snakeweed's control. Another area of emphasis, has been grazing management techniques and feeding studies to minimize toxicological effects on livestock. Feeding trials have demonstrated that, snakeweed ingestion at 10 percent of diet did not impair fertility or semen characteristics in the test animal which was male rats.

Grants have been awarded from funds appropriated as follows: fiscal year 1989, \$100,000; fiscal year 1990, \$148,000; fiscal year 1991, \$150,000; fiscal years 1992 and 1993, \$200,000 per year; fiscal year 1994, \$188,000; fiscal years 1995 and 1996, \$169,000 each year; and fiscal year 1997, \$175,000. A total of \$1,499,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$249,251 state appropriations in 1991; \$200,110 state appropriations in 1992; \$334,779 state appropriations in 1993; \$302,793 state appropriations in 1994; \$294,451 state appropriations in 1995, and an estimated \$300,000 in state appropriations in 1996.

Research is being conducted at New Mexico State University. The project was initiated in 1989. Currently additional and related objectives have evolved and anticipated completion date for these is 1999. Considerable progress has been made on many of the objectives. Anticipated completion date of the additional and related objectives that have resulted based on the current work, would indicate another five years. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

Each year the grant is peer reviewed and reviewed by CSREES's senior scientific staff. A summary of those review indicated progress in the achieving the objectives.

CANOLA RESEARCH SPECIAL GRANT, KANSAS STATE UNIVERSITY

Rapeseed lines from around the world are being evaluated for increased winter hardiness. Elite lines are being used to develop canola germplasm lines that will survive the winter in the central Great Plains. This will be accomplished using a plant breeding program. The domestic demand for canola oil has been increasing rapidly. With little domestic production, most of the demand has been met by imports. Private seed companies are not devoting time or money to develop the cultivars needed for canola production in Kansas and central Great Plains. Oil seed crushing facilities in the region are shutting down for several months each year due to a lack of sunflowers/soybeans grown in the area. A canola harvest in July would precede the sunflower or soybean harvest by three months, help crushing facilities continue crushing during this slow period, and maintain jobs. A canola industry in the area would also help spread the risk of the producers into more than just a small grain commodity base and into the oilseed market. Germplasm developed at Kansas State University is being evaluated from Virginia and Georgia to Wyoming and Texas and may help develop an industry in other areas of the country. In view of the significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research. The principal researcher believes this research to be of national, regional or local need.

The original goal was to collect germplasm with increased winter hardiness and use it to develop cultivars with sufficient winter survivability to be grown in the central Great Plains. At present, nearly 700 rapeseed and canola quality lines have been acquired and tested. The hardiest have been used as parents to produce lines. In the past five years, over 800 crosses have been made. Field and laboratory testing began during the fall of 1993. In 1993-94, advanced selections from these populations had a 30 percent increase in winter survival over the best released cultivars in western Kansas and in environments where winter survival was not a factor, these same lines had a 20 percent yield advantage over the best released cultivars. In 1994-95 this germplasm was tested at 12 locations in seven states throughout the Great Plains and Midwest. Over all locations, several experimental lines that have shown increased winter hardiness in past years had yields equal to the best cultivars used as checks. The winter of 1995-96 has been severe in the Great Plains as well as most of the country. Severe winter kill is expected in the breeding nurseries with only the hardiest plants surviving. Advanced lines continued to demonstrate a winter survival advantage over previously released cultivars. Over the

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next several years, surviving plants will be advanced and those lines possessing superior traits will become the basis of our second generation of released cultivars. In 1995, KS3579 was released to other breeders as a germplasm. This line has shown significant improvement in winter hardiness and will be beneficial in increasing winter hardiness in canola cultivars around the world. A canola quality rapeseed cultivar is planned for release in the summer of 1997. It will be used as the basis for establishing production in south central Kansas, as well as other areas of the Great Plains.

Work began on this project in 1992. Funding for fiscal year 1992 and fiscal year 1993, was \$100,000 per year; fiscal year 1994 was \$94,000; and fiscal years 1995 through 1997 were \$85,000 each. A total of \$549,000 has been appropriated.

Kansas State University has provided \$44,960 in fiscal year 1992, \$21,321 in fiscal year 1993, and \$22,336 in fiscal year 1994, \$23,399 in fiscal year 1995, \$24,513 in fiscal year 1996 and \$25,679 in fiscal year 1997. An additional \$50,000 was provided through a grant from Dane G. Hansen Foundation for fiscal years 1993–1995.

The work is being conducted at Kansas State University, Agricultural Experiment Station, Department of Agronomy. The primary research site is at Manhattan with additional field locations at Hutchinson, Hays, Colby, Belleville, Kingman, Garden City and Parsons, Kansas. Germplasm developed by Kansas State University is also being cooperatively tested by researchers in Texas, Missouri, Colorado, Nebraska, Illinois, Arkansas, Oklahoma, and Wyoming.

The original objectives were to develop the factors needed to establish canola production in Kansas and the Central Great Plains. The primary concern addressed by this project was the lack of cultivars adapted to the area. Advanced selections adapted for the growing conditions of the Great Plains and representing a significant improvement in both winter hardiness and yield potential for our unique environment, are being developed. Foundation seed of the best of these lines will be increased over the 1996–1997 growing season and released to certified seed growers in 1997. Industrial groups have been instrumental in developing a market for the area. Improved germplasm in the early generations continues to be identified so progress and cultivar improvement can continue. The average time between the initial cross and a released variety is 8 to 10 years. The first crosses made at Kansas State University were in 1993. Germplasm that is currently targeted for improvement will be released in year 2007. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula or other funds.

This project is reviewed annually, based upon the annual progress report and presentation at the Southern Extension and Research Activity Information Exchange Group for oilseeds [SERA-IEG-11]. The review is conducted by the cognizant staff scientist who has determined that the research is in accordance with the mission of the agency.

CENTER FOR ANIMAL HEALTH AND PRODUCTIVITY, PENNSYLVANIA

This research is designed to reduce nutrient transfer to the environment surrounding dairy farms in the Chesapeake Bay watershed. Progress to date includes the development of a individual dairy cow model which will predict absorbed amino acids and the loss of nitrogen in manure. This model has been developed into user friendly software so that trained farm advisors can evaluate herd nutrient management status while on site. A whole farm model has been developed which integrates feeding and agronomic practices to predict utilization of nitrogen and farm surpluses. Using these tools, a survey of dairy farms in the region has been done to assess nitrogen status on dairy farms and potential management practices to reduce nitrogen excesses on dairy farms. Refinement of the model tools and research to refine estimates of the environmental fate of excess nitrogen from dairy farms is in progress.

The principal researcher believes that reducing non-point pollution of ground and surface water by nitrogen from intensive livestock production units is of concern nationally, and especially in sensitive ecosystems like the Chesapeake Bay. This research is designed to find alternative feeding and cropping systems which will reduce net nutrient flux on Pennsylvania dairy farms to near zero. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research. The principal researcher believes this research to be of national, regional, and local need.

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The original goal of this research remains the development of whole farm management systems which will reduce nutrient losses to the external environment to near zero. To date the researchers have developed their own models to more accurately formulate rations for individual dairy cows which permit the comparison of alternative feeding programs based upon both maximal animal performance and minimal nutrient losses in animal waste. This model is being tested on select commercial dairy farms to evaluate the extent to which total nitrogen losses in manure can be reduced without impacting economic performance of the farm. At the same time, whole farm nutrient models have been developed to evaluate alternative cropping systems which will make maximum use of nutrients from animal waste and minimize nutrient flux from the total farm system. These tools are currently being used to survey the current status of nutrient balance on farms in the area and efforts to fine tune the tools are in progress.

A grant has been awarded from funds appropriated in fiscal year 1993 for \$134,000 and in fiscal year 1994 for \$126,000. In fiscal years 1995–1997, \$113,000 has been appropriated each year. A total of \$599,000 has been appropriated.

Research is being conducted at the University of Pennsylvania, College of Veterinary Medicine. The University researchers anticipate that work currently underway will be completed by September 1998. This will complete the original objectives of the research. The principal researcher indicates that consideration has been given to the broadening of objectives to include additional nutrients in the model system, but this has been dropped because technical expertise required is currently not readily available. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

The Center for Animal Health and Productivity project was last reviewed in June 1996. An on site review by agency technical staff was conducted in June 1995. It was concluded that project objectives are within the goals of the program, are within the mission of both USDA and CSREES, and the institution is well equipped and qualified to carry out the research project.

CENTER FOR INNOVATIVE FOOD TECHNOLOGY, OHIO

Funds from the fiscal year 1996 grant are supporting research projects on using neural network/fuzzy logic tools to develop a model of a growing and processing cycle for processing tomatoes, developing specifications for a system and to optimize the techniques necessary to satisfactorily package products sterilized non-thermally with pulsed electric field systems, to demonstrate whether an ultrasonic washing appliance has the capacity to kill common foodborne pathogens or modify it to do so, to demonstrate the feasibility of using enzyme linked immunosorbent assays in the measurement of pesticides in Great Lakes fish, to refine and optimize the performance of a prototype turkey deboning system, to develop a vision based inspection system for baked goods, and to develop electrostatic coating processes for applying powdered materials to food products.

The principal researcher believes the value-added food processing industry is the largest industry in Midwestern states, including Ohio where the industry contributes over \$17 billion to the annual economy. From an economic development point of view, processing and adding-value to crops grown within a region is the largest possible stimulus to that region's total economic product. This program aims to partner with and encourage small and medium sized companies to undertake innovative research that might otherwise not be undertaken due to risk aversion and limited financial resources for research and development in these companies. In view of significant needs for research in high priority national interest topics such as improved pest management systems and food safety, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research.

The original goal of the research was to develop innovative processing techniques to increase food safety and quality or reduce processing costs. The neural network project has led to a model that will be used to relate growing and processing variables to product quality, resulting in higher product quality at lower cost. The pulsed electric field sterilization program has demonstrated the ability to produce high quality products with extended shelf stability. The research on immunosorbent assays has demonstrated benefits, beyond the original scope of the project, to the poultry industry by providing an inexpensive and timely method for measuring residual pesticide levels in turkeys. The coating project has generated several applications where the shelf life of products can be extended.

The work supported by this grant began in fiscal year 1995. The project received appropriations of \$181,000 in fiscal years 1995 through 1997. A total of \$543,000 has been appropriated. In fiscal year 1995, non-federal funds included \$26,000 from

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state funds and \$70,000 from industry memberships. In fiscal year 1996, non-federal funds included \$26,000 in state funds and \$80,000 in industry funds.

Research is being conducted in the laboratories of the Ohio State University and at various participating companies in Ohio, Illinois, and Pennsylvania. The principal investigator anticipates that some projects supported by the fiscal year 1996 grant will have been completed by February 28, 1997, while other projects will not be completed until February 28, 1998. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula funds.

An agency science specialist conducts a merit review of the proposal submitted in support of the appropriation on an annual basis. Since the agency has not yet received the proposal in support of the fiscal year 1997 proposal, the last review of the proposal was conducted on January 22, 1996. At that time, the agency science specialist believed that the projects addressed issues relevant to food manufacturing, were scientifically sound, and that satisfactory progress was being demonstrated using previously awarded grant funds.

CENTER FOR RURAL STUDIES, VERMONT

The University is developing and refining social and economic indicators used to evaluate the impact of economic development programming and activities. They are also perfecting a delivery format for technical assistance for community and small business development. A major focus of current research relates to utilizing the World Wide Web as a major delivery vehicle. The principal researcher believes that the database and analytical capability provide technical indicators and timely information to support entrepreneurial and community development activities in the State. The program is conducted in concert with other University and State agency outreach activities. In view of significant needs for research in high priority national interest topics, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research.

The original goal was to create a database and analytical capability for rural development in Vermont. Examples of past accomplishments include thematic maps presented to help target child hunger programs and target places for programmatic intervention; analytical reports provided to guide the development of retail shopping areas; a reference volume, "Economic Handbook for Vermont Counties," produced for public distribution to help Vermont citizens and leaders answer the most frequently asked questions about their State and counties; currently utilizing the World Wide Web to disseminate information and technical assistance.

The work supported by this grant began in fiscal year 1992 and the appropriation for fiscal years 1992-1993 was \$37,000 per year; fiscal year 1994, \$35,000; and fiscal years 1995-1997, \$32,000, for a total of \$205,000. Prior to receipt of any Federal funds in fiscal year 1991, the Center was supported by \$91,130 in State and other non-federal funds. In fiscal year 1992, these funds increased to \$101,298 and to \$143,124 in fiscal year 1993. The amount of non-federal dollars was \$3,547 for fiscal years 1995-1996 and \$2,931 in fiscal year 1997 plus researcher's salary.

Research is being conducted at the University of Vermont. The original completion date was September 30, 1993. The original objectives of the research project have been met. The completion of additional objectives is scheduled for August 31, 1998. However, in keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula funds.

The agency evaluates merit of research proposals as submitted. No formal evaluation of this project has been conducted.

CHESAPEAKE BAY AQUACULTURE, MARYLAND

The objective of this research is to improve the culture of striped bass through genetics, reproductive biology, nutrition, health management, waste management and product quality. The research provides a balance between basic and applied research. The principal researcher believes the Mid-Atlantic region of the country has significant opportunities to contribute to the overall development of the domestic aquaculture industry. Research supported through this program can have broad application and enhance production efficiency and the sustainability of aquaculture as a form of production agriculture. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research.

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The original research goal was to generate new knowledge that can be utilized by the aquaculture industry to address problems limiting the expansion of the industry in Maryland and the Mid-Atlantic region. The program focuses on closing the life cycle of the striped bass and its hybrids, enhancing production efficiency, and improving product quality under aquaculture conditions. Research is conducted in the areas of growth, reproduction and development, aquacultural systems, product quality, and aquatic animal health. Researchers are currently evaluating the performance of triploid striped bass. Progress has been made in developing controlled artificial spawning techniques and refining the nutritional requirements of striped bass. Scientists continue studies to characterize waste production as a function of feeding levels to reduce waste generation in striped bass production systems.

The work supported under this grant began in fiscal year 1990 and the appropriation for fiscal year 1990 was \$370,000. The fiscal years 1991–1993 was \$437,000 per year; fiscal year 1994, \$411,000; and fiscal years 1995–1997, \$370,000 each year. A total of \$3,202,000 has been appropriated.

The university reports the amount of non-federal funding for this program is as follows: in fiscal years 1991 and 1992, \$200,000; in fiscal years 1993 and 1994, \$175,000; in fiscal year 1995, \$400,000; and in fiscal year 1996, \$536,000. The university reports that these funds are from direct state appropriations and other non-federal funding sources.

Research is being conducted at the University of Maryland. The original specific research objectives were to be completed in 1993. These specific research objectives have been met. The specific research outlined in the current proposal will be completed in fiscal year 1998. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

The agency evaluates the progress of this project on an annual basis. The university is required to submit an accomplishment report when the new proposal is submitted to CSREES for funding. The 1996 review indicated the proposal was well written with objectives clearly stated, that adequate progress had been reported on previous work, and that the scientific expertise is appropriate for the proposed research.

COASTAL CULTIVARS

This project will be undertaken to identify new ornamental, fruit, and vegetable crops for the lower coastal plain of Georgia and develop management systems for profitable production. This effort is designed to improve the rural economy and to help supply an expanding market for the products in that region and possibly beyond. The research under this project has regional significance for coastal zone land in the South Eastern U.S. on potential new plants for the growing regional market for ornamental and speciality fruits and vegetables. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research. The original goal of this research was to identify new plant cultivars to provide alternative crops with economic potential to the coastal area.

The work supported by this grant begins in fiscal year 1997 and the appropriation for fiscal year 1997 is \$200,000.

Research will be conducted at the University of Georgia coastal garden. The project is projected for three years duration and, therefore, should be completed following fiscal year 1999. In keeping with the Administration's policy of awarding research grants competitively, no further funding for this grant is requested.

COMPETITIVENESS OF AGRICULTURE PRODUCTS, WASHINGTON

This grant improves the global competitiveness of value-added agricultural and forest products produced in the Pacific Northwest region. It identifies and conducts needed research and disseminates the results through various activities such as trade shows, international conferences, and a variety of media. Research focuses on foreign market assessments, product development, and policy and trade barriers. Particular attention has been paid to developing the technology that can add value to U.S. agricultural and forest products in order to make U.S. exports more competitive. The principal researchers believe that rural economic development and growth of the Pacific Northwest region is dependent upon the ability of the agricultural and forest product sectors to penetrate overseas markets, especially in Pacific Rim countries. Japan and China present especially attractive prospects for evolving U.S. food and forest products exports. In view of significant needs for research in high priority, national interest topics such as improved pest management systems, funds are

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not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act, or other funding could be used to support this research.

The original goals were to develop export markets for value-added food and forest products produced in the Pacific Northwest and to improve competitiveness of these industries. Research at Washington State University's International Marketing Program for Agricultural Commodities and Trade enables Pacific Northwest producers to grow and export Asian and other products never before produced in this country on a commercial basis. The Center identified export opportunities in East Asia and elsewhere and has developed production and marketing systems for Wagyu beef, azuki beans, edamame soybean, and wasabi radish, to name a few. Other promising products are in the pipeline leading toward commercialization. The Center is also developing economical and environmentally-friendly food processing techniques. It searches for scientific solutions to trade barriers. It monitors progress in multilateral trade agreements, leading to opportunities for trade liberalization.

Research at the University of Washington's Center for International Trade in Forest Products has helped open the Japanese housing market to U.S. exports. The Center hosted a significant housing export conference in Seattle in September 1996 at which U.S. Ambassador Walter Mondale and Japanese officials agreed to what has been a major breakthrough in U.S. export opportunities. Japanese builders have benefited from the Center's research. They have been taught how to lower their costs by using U.S. building techniques and products. Value-added exports have grown 200 percent since 1989 as Japan deregulated its housing market after recognizing the opportunities set forth by this research. Other research at the Center developed export and marketing information for prefabricated housing, red cedar, substitute products, Russia/China trade potential, impact of climate change on competitiveness, U.S./Canadian trade, and impact of Western supply constraints on Southern forest products markets.

The work supported by this grant began in fiscal year 1992. The appropriation for fiscal year 1992-1993 was \$800,000 each year; fiscal year 1994, \$752,000; and fiscal years 1995-1997, \$677,000 each year. A total of \$4,383,000 has been appropriated.

The non-federal funds and sources provided for this grant are as follows: \$716,986 State appropriations, \$209,622 product sales, \$114,000 industry, and \$661,119 miscellaneous for a total of \$1,701,727 in 1991; \$727,345 State appropriations, \$114,581 product sales, \$299,000 industry, and \$347,425 miscellaneous for a total of \$1,488,351 in 1992; \$1,259,437 State appropriations, \$55,089 product sales, \$131,000 industry, and \$3,000 miscellaneous for a total of \$1,448,526 in 1993; \$801,000 State appropriations, \$1,055,000 product sales, \$1,040,000 industry, and \$244,000 miscellaneous for a total of \$3,140,000 in 1994; \$810,000 State appropriations, \$42,970 product sales, \$785,000 industry, and a \$2,000,000 gift of a ranch due to the IMPACT Center's research on Wagyu Cattle, for a total of \$3,637,870 in 1995; and \$844,000 State appropriations, \$45,000 product sales, \$900,000 industry, and \$45,000 miscellaneous for a total of \$1,789,000 in 1996. The preliminary allocation for 1997 is \$1,305,000 state appropriations, \$92,000 product sales, \$1,000,000 industry, and \$85,000 miscellaneous for a total of \$2,542,000.

The research program is being carried out by the International Marketing Program for Agricultural Commodities and Trade at Washington State University, Pullman, and the Center for International Trade in Forest Products at the University of Washington, Seattle.

This is a continuing program of research with long-term, crop and animal improvement projects, and long-term agricultural and forest products market development projects. As projects are completed, new projects have begun. Some of the new projects can be completed by 2000, but some improvement and development projects will take much longer to reach their full potential. Objectives have been met for certain products in certain markets, but unmet opportunities abound. With the exception of the improvement projects, most of the work can be completed by 2000. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

Projects are evaluated annually through review of progress reports and periodically through more extensive review. The U.S. Department of Agriculture reviewed the Washington State University project in 1991. The University of Washington Center is just completing a formal 5-year review. The report will be available early in 1997. In addition, the Center made comprehensive use of a broadly-construed Executive Board having industry, agency, and academic representation to review quarterly accomplishment reports and suggest additional activities. The last formal on-site Departmental review was in 1991, but the Department reviews the project annually and participates in the quarterly Executive Board reviews.

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COOL SEASON LEGUME RESEARCH

The Cool Season Legume Research Program involves collaborative research projects to improve efficiency and sustainability of pea, lentil, chickpea and fava bean cropping systems. Scientists from seven states where these crops are grown have developed cooperative research projects directed toward crop improvement, crop protection, crop management and human nutrition/product development. The principal researcher believes the original goal of this project was to improve efficiency and sustainability of cool season food legumes through an integrated collaborative research program and genetic resistance to important virus diseases in peas and lentils. Evaluation studies of biocontrol agents for root disease organisms on peas are underway. Other studies are evaluating integration of genetic resistance and chemical control. Considerable progress has been made using biotechnology to facilitate gene identification and transfer. Management system studies have addressed tillage and weed control issues. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research.

The work supported by this grant began in fiscal year 1991 with appropriations for fiscal year 1991 of \$375,000; fiscal year 1992 and 1993, \$387,000 per year; fiscal year 1994, \$364,000; fiscal year 1995, \$103,000; fiscal years 1996 and 1997, \$329,000. A total of \$2,274,000 has been appropriated.

The nonfederal funds provided for this grant were as follows: fiscal year 1991, \$304,761 state appropriations, \$14,000 industry, and \$18,071 other nonfederal; fiscal year 1992, \$364,851 state appropriations, \$15,000 industry, and \$14,000 other nonfederal; fiscal year 1993, \$400,191 state appropriations, \$19,725 industry, and \$10,063, other nonfederal; and fiscal year 1994, \$147,607 nonfederal support. Nonfederal support for fiscal year 1995 was \$150,607 and for fiscal year 1996 it was \$386,887.

Research has been conducted at the Agricultural Experiment Stations in Idaho, Oregon, Washington, Wisconsin, Minnesota, New York and New Hampshire. The funds have been awarded competitively among participating states and not all states receive funds each year. The projected duration of the initial project was five years. In keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula funds.

The steering committee made up of growers, industry representatives and scientists, review this project annually for merit and relevance. Each annual proposal is made up of sub-projects that have been peer reviewed and selected to address priority issues within each of the broad objectives. The combined project is reviewed by CSREES before funds are awarded.

CRANBERRY-BLUEBERRY DISEASE AND BREEDING, NEW JERSEY

This work has focused on identification and monitoring of insect pests on blueberries and cranberries, the identification, breeding, and incorporation of superior germplasm into horticulturally desirable genotypes, identification and determination of several fungal fruitrotting species, and identification of root-rot resistant cranberry genotypes. Overall, research has focused on the attainment of cultural management methods that are environmentally compatible, while reducing blueberry and cranberry crop losses. This project involves diseases having major impacts on New Jersey's cranberry and blueberry industries, but the findings here are being shared with experts in Wisconsin, Michigan, and New England. In view of significant needs for research in high priority national interest topics such as the Department's pest management initiative, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research.

The original goal was the development of cranberry and blueberry cultivars compatible with new disease and production management strategies. Last year, over 75 blueberry selections were moved into advanced testing, and wild blueberry accessions resistant to secondary mummy berry infections were identified. The biology and seasonal life history of spotted fireworm on cranberries was determined. A pheromone trap-based monitoring system for cranberry fruitworm was developed and further refined for commercialization in 1997. Blueberry fruit volatiles attractive to blueberry maggot were identified and tested in the field. Seven major fungal fruit-rotting species were identified, and their incidence in 10 major cultivars of blueberry and blueberry were determined, and it is likely that resistance to fruit rots is specific to fungal species. Researchers identified about 20 root rot-resistant cranberry genotypes in an artificially inoculated field trial.

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Grants have been awarded from funds appropriated as follows: fiscal year 1985, \$100,000; fiscal year 1986–1987, \$95,000 per year; fiscal years 1988 and 1989, \$260,000 per year; fiscal year 1990, \$275,000; fiscal years 1991–1993, \$260,000 per year; fiscal year 1994, \$244,000; and fiscal years 1995–1997, \$220,000 each year. A total of \$2,769,000 has been appropriated. State and other non-federal sources are providing funds in the amount of \$93,970 for this grant in fiscal year 1997.

This research is being conducted at the New Jersey Agricultural Experiment Station. The anticipated completion date for the original objectives was 1995. Those objectives have not been met. To complete the breeding, disease and insect management and provision of new management guidelines for extension and crop consultants, it is estimated that an additional three to nine years will be required. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

The last agency evaluation of this project occurred in December, 1996. In summary, the evaluation stated that the effort has continued to be highly productive, with various improved management strategies, plant material and environmentally-balanced pesticides being areas of major impact.

CRITICAL ISSUES

These grant funds support research on critical issues impacting agriculture that require immediate attention. These funds are intended to initiate research efforts until other resources can be secured to address the critical issues. This program started in fiscal year 1996 when one half of our Critical Issues funds were allocated to initiate research on potato late blight, which is caused by a fungus, a new strain of which has spread through the nation causing extensive crop losses. The objective is to have a better understanding of the fungus to enable scientists to predict and in manage the outbreaks using an integrated pest management program. The other half of our 1996 Critical Issues funds were allocated to initiate research on vesicular stomatitis, a disease of horses, cattle, and swine which has symptoms very similar to those of food and mouth disease. Livestock producers are concerned about the potential adverse impact of quarantine measures as a result of the spread of this disease. The objective is to develop a better understanding of the disease so more effective control measures can be used. Both potato late blight and vesicular stomatitis have national impact of a critical nature and are therefore both very high priority efforts.

Six research proposals have been funded to address potato late blight, and scientists have initiated their work on aspects of this epidemic. The first North American Late Blight Workshop was convened which involved potato growers and processors, national potato organizations, university scientists, and the chemical industry. The major contribution of this workshop was the resulting set of recommendations for short-and long-term efforts need to solve this problem, and workshop organizers set up a Internet home page which invites dialogue on research and education needs for the management of late blight.

Two research proposals have been funded to address vesicular stomatitis, which was identified as the highest priority problem in 1996 in discussions with commodity groups, regulatory veterinarians and colleagues in ARS and APHIS. Work has been initiated under the two funded projects which are now focusing on transmission of the virus.

\$200,000 was appropriated in both fiscal year 1996 and 1997 for a total appropriation of \$400,000 to date.

Potato late blight work is being carried out at Washington State University, Oregon State University, the University of Idaho, the University of Wisconsin, and Pennsylvania State University. Vesicular stomatitis work is being carried out at Colorado State University and the University of Arizona. The Critical Issues funds are intended to support the initiation of research on issues requiring immediate attention until other, longer-term, resources can be secured. The objectives of the projects supported with these funds are short-term and are therefore expected to be met within 1–2 years.

All projects were reviewed for scientific merit before funding decisions were made. Also, scientists whose work on potato late blight and vesicular stomatitis is supported with Critical Issues funding are in close contact with CSREES' National Program Leaders so that the agency is kept abreast of developments as they occur.

DAIRY AND MEAT GOAT RESEARCH, PRAIRIE VIEW A&M, TEXAS

The program has addressed a range of issues associated with goat production. Research by Scientists at the International Dairy Goat Center, Prairie View A&M University focuses on problems affecting goat production in the United States. Issues

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included are the study of nutritional requirements of goats, disease problems, methods to improve reproductive efficiency in the doe, the use of gene transfer to improve caprine genetics and the evaluation of breeding schemes to improve meat and milk production. Currently, research is in progress to develop an enterprise budget support program for goat production systems in the Texas Gulf Coast Region. The principal researcher believes that nationally, most of the farm enterprises that include goats are diverse and maintain a relatively small number of animals. Responding to disease, nutrition, breeding and management problems will improve efficiency of production and economic returns to the enterprise. In view of significant needs for research in high priority national interest topics, funds are not proposed to continue this Special Research Grant. At the discretion of the State, other funding could be used to support this research.

The original goal of this research was to conduct research that will lead to improvement in goat production among the many small producers in the United States. Research has been conducted to develop and improve nutritional standards, improve genetic lines for meat and milk production and to define mechanisms that impede reproductive efficiency in goats. Current efforts focus on the development of enterprise budget management tools for goat producers in the Texas gulf coast region.

Grants have been awarded through appropriated funds as follows: \$100,000 per year for fiscal years 1983–85; \$95,000 per year for fiscal years 1986–88; no funds were appropriated in fiscal year 1989; \$74,000 for fiscal year 1990; \$75,000 per year for fiscal years 1991–1993; \$70,000 for fiscal year 1994; and \$63,000 per year for fiscal years 1995–1997. A total of \$1,143,000 has been appropriated. The University reports no non-federal funds expended on this program.

Research is being conducted at Prairie View A&M University in Texas, The overall objective of this research is to support the needs of small farms engaged in the production of meat and milk from goats along the Texas Gulf Coast. The university researchers continue to address those needs on an annual basis and anticipate that work currently in progress will be completed by the end of fiscal year 1998. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

The Dairy/Meat Goat Research grant was last reviewed in June 1996. The project objectives are within the goals of the program, are within the mission of both USDA and CSREES, and the institution is well equipped and qualified to carry out the research project.

DELTA RURAL REVITALIZATION, MISSISSIPPI

The project has gone through several phases in the delineation of a strategy for a long-range development plan for the Mississippi Delta region. Phase I was completed with the delivery of a baseline assessment of the economic, social, and political factors that enhance or impede the advancement of the region. Phase II of the project evaluated the potential for entrepreneurship and small business creation as mechanisms to improve economic conditions. Phase III is now focusing on technical assistance to Delta region manufacturing firms to strengthen their ability to provide employment and incomes. Continued emphasis on technical assistance and the development of appropriate data bases to guide development opportunities. The principal researcher believes that the databases, technical assistance, and analytical capability will provide more impact in support of entrepreneurial and community development activities in the State. The program is conducted in concert with other University and State agency outreach activities. In view of significant needs for research in high priority national interest topics, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research.

The original goal was to develop an analytical baseline for the Delta region. A publication titled, "A Social and Economic Portrait of the Delta," serves as an analytical baseline for further work. A Delta Inventors Society has been created to assist creative individuals in developing ideas which can be successfully commercialized. An Entrepreneurial Forum was established to help new business ventures with start-up advice and assistance. Finally, a venture capital association has been formed to help both inventors and businessmen find capital resources to carry out their plans. The emphasis of the project has now shifted to technical assistance for industrial development.

Grants have been awarded from funds appropriated as follows: fiscal year 1989, \$175,000; fiscal year 1990, \$173,000; fiscal year 1991–1993, \$175,000 per year; fiscal year 1994, \$164,000; fiscal year 1995–1997, \$148,000 per year. A total of \$1,481,000 has been appropriated. Total non-federal funds directed to this project, as reported

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by Mississippi State University, are: fiscal year 1991, \$117,866; fiscal year 1992, \$84,402; fiscal year 1993, \$68,961. Reports for later years are incomplete at this time.

Research is being conducted at the Mississippi State University. The original completion date was September 30, 1990. The original objectives of the research project have been met. The completion of additional objectives is scheduled for September 30, 1997. In keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula funds.

The agency evaluates merit of research proposals as submitted. No formal evaluation of this project has been conducted.

DROUGHT MITIGATION, NEBRASKA

This grant supports the National Drought Mitigation Center program in the Department of Agricultural Meteorology at the University of Nebraska. The Center is developing a comprehensive program aimed at lessening societal vulnerability to drought by promoting and conducting research on drought mitigation and preparedness technologies, improving coordination of drought-related activities and actions within and between levels of government, and assisting in the development, dissemination, and implementation of appropriate mitigation and preparedness technologies in the public and private sectors. Emphasis is directed toward research and outreach projects and mitigation/management strategies and programs that stress risk minimization measures rather than reactive actions.

The principal researcher believes drought is a normal part of climate for virtually all regions of the United States. The impacts of drought are diverse and affect the economic, environmental, and social sectors of society. Almost without exception, the occurrence of widespread severe drought in the past decade has illustrated the inadequacy of existing assessment, mitigation, response, and planning efforts at the federal, state, and local level. Rather than the "crisis management" approach of the past, a "risk management" approach is needed where the emphasis is on preventive measures, preparedness, education, and mitigation strategies. Until recently, little attention has been focused on drought among the long list of natural hazards that affect our nation. The Center is receiving non-federal funds in support of this research from the University of Nebraska. In view of the significant needs for research on national high priority topics, additional funding for this project is not proposed. At the discretion of the State, Hatch Act or other funding could be used to support this effort.

The original goal of this research was to create a National Drought Mitigation Center and develop a comprehensive program aimed at lessening societal vulnerability to drought. The Center has created an information clearinghouse for drought mitigation technologies and associated informational products. This has been accomplished through the development of a national drought management information system, an electronic portfolio of information available on the Internet. About 16,000 users each month connect to the National Drought Mitigation Center's home page to gather information on drought conditions and management strategies. This home page was used extensively by state and federal agencies during the 1996 drought to assist in the evaluation and response process. This home page networks potential users of drought-related information in the United States and elsewhere with information that would otherwise be unavailable or inaccessible to users.

The National Drought Mitigation Center played an important role in the response of federal and state government to the 1996 severe drought in the Southwest and southern Great Plains states. The Center participated in the Multi-state Drought Task Force workshop organized at the request of President Clinton and help formulate long-term recommendations to improve the way this nation prepares for and responds to drought. The Center was also a member of the Western Governors' Association's Drought Task Force. This task force has also developed recommendations to reduce the risks associated with the occurrence of drought in the western United States. The Center is actively involved with the Western Governors' Association in the implementation of these recommendations.

The work supported by this grant received an appropriation of \$200,000 in fiscal years 1995 through 1997, for a total appropriation of \$600,000. The University of Nebraska contributed \$75,737 of non-federal funds in support of this research in fiscal year 1995 and \$58,977 in fiscal year 1996. The University of Nebraska will contribute \$61,545 in fiscal year 1997.

The research will be conducted at the University of Nebraska-Lincoln. The research conducted under this project is being undertaken under a series of 10 tasks that have been addressed, but these activities are ongoing. The national drought

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management information system has been established but much of this work is continuing in order to expand the information available through the clearinghouse and to keep it current. For example, the drought watch section of the Center's home page is updated monthly to provide users with up-to-date information on water and climate conditions nationwide. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

The activities of the Center are continuously evaluated by users that have access to the home page. They provide feedback and suggestions on a continuous basis. The Center also solicits input on its program and products at workshops and other meetings in which it participates. The Center has established a national advisory committee that consists of three representatives: one from state government, one from federal government, and one from a regional organization. These committee members are well known for their expertise in drought management. The purpose of this committee is to provide feedback to the Center on existing products and program direction. This national advisory committee met twice during 1996 to advise the director and staff.

ENVIRONMENTAL RESEARCH, NEW YORK

The environmental research in New York consists of two main thrusts which are aimed at understanding the nitrogen flowing from agricultural activities and their impacts on adjacent ecosystem components, and the agricultural dimensions of global climate change. Included in the program are a technology transfer aspect and an environmental assessment activity. The principal researcher believes there is a need to understand the impacts of ecosystem components upon each other. As global change occurs, impacts will become critical. In view of the significant need for research on national, high priority topic areas, such as integrated pest management, funding for this project is not proposed. At the discretion of the State, Hatch Act or other funding could be used to support this effort.

The main objectives of this program are to identify and address interactions and feedbacks between agricultural ecosystems, natural ecosystems, and natural resources which affect the long-term well being of each. Agroecosystem management strategies that maintain agricultural productivity and environmental quality will be devised. Policies will be established for addressing problems at the interface between agriculture and the environment. Ongoing program activities are intended to meet the mentioned objectives. Some examples of projects are as follows: Several aspects of nitrogen supply interactions with crops and the recovery of fertilizer nitrogen at crop harvest. Water quality research has been focused on the relation of intensive animal production areas and contamination caused by nitrates. Geographic Information System capability is being developed to evaluate various scenarios regarding the future of agriculture in broad landscape changes.

In the sixth year of the program, the principal investigators propose to substantially complete research on the two main themes of their program to date, namely nitrogen flows from agricultural ecosystems to non-agricultural ecosystems and groundwater. A new project on carbon storage in soils will be added to continuing work on climate. Continuation of their involvement with the Remington Farms Sustainable Agriculture Project on the Eastern Shore of Maryland will extend the results of their nitrogen research programs to other farms. They will also continue two projects that focus on intervention strategies to improve management of agricultural systems; one will explore the potential for reducing herbicide use by using weather forecasts to predict weed competition, and the second will explore the use of constructed wetlands to off-set barnyard run-off. The principal investigators will expand their activities in watershed management by increasing support to the program that was begun last year.

The work supported by this grant began in fiscal year 1991 with an appropriation of \$297,000. The fiscal years 1992-1993 appropriation was \$575,000 per year; \$540,000 in fiscal year 1994; and fiscal years 1995 through 1997, \$486,000 each year. A total of \$3,445,000 has been appropriated.

In fiscal year 1991, Cornell University provided \$27,893 and the State of New York provided \$118,014. In fiscal year 1992, Cornell University provided \$37,476 and the State of New York \$188,915. In fiscal year 1993, Cornell University provided \$13,650 and the State of New York \$243,251. In fiscal year 1994, the State of New York provided \$214,989. In fiscal year 1995, the State of New York provided \$233,085. In fiscal year 1996, the State of New York provided \$388,301.

This research is being conducted at Cornell University. The original estimate was for a five-year program and many of the initial objectives in the nitrogen and climate change areas have been met. New objectives evolved from the original work

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and the program was also oriented to consider broader dimensions of environmental management, particularly strategies for community-based watershed management, involving linkage of technical knowledge with social and local governmental perspectives and needs. Estimated completion dates for current program elements are:

1997–1998 program year:

- Impacts of Nhx deposition on forests
- Landscape evaluation of denitrification
- Nitrogen utilization in agricultural ecosystems
- Contributions of agricultural ecosystems to climate forcing

1998–1999 program year:

- Nutrient processing in wetlands
- Use of weather forecasts in weed management
- Use of constructed wetlands to remediate barnyard run-off
- Effect of climate variability on crop production
- Carbon storage in soils

Completion beyond 1999:

- Watershed science and management
- Effects of elevated CO₂ on crop yield potential
- Remington farms sustainable ag. project (a 10-year project)

Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

The agency evaluates this project through the review of an annual proposal submission.

ENVIRONMENTAL RISK FACTORS/CANCER, NEW YORK

The Cooperative State Research, Education, and Extension Service has requested the university to submit a grant proposal that is currently being reviewed. The American Cancer Society has estimated that over 184,000 women in the United States will be diagnosed with breast cancer in 1996. The role of environmental risk factors, such as pesticides, is of concern to women, the agricultural community, and policymakers. While some data exist in the scientific literature, little has been done to synthesize and evaluate these studies and make this research information available to the people who need it—the general public. This project, emphasizing risk reduction prevention information, will work at filling that void. However, in view of the significant needs for research on national high priority topics, such as integrated pest management, funding for this project is not proposed. At the discretion of the State, Hatch Act or other funding could be used to support this effort.

The original goals of this research are:

1. To establish a database of critical evaluations on the current scientific evidence of breast carcinogenicity and effects on breast cancer risk for selected pesticides.

2. To effectively communicate database information to the scientific community, federal agencies, public health professionals, the agricultural community, and the general public using innovative electronic methods of communication, in-service training sessions, and printed materials.

3. To further develop the Breast Cancer Environmental Risk Factors World Wide Web to improve ease of use, add informational materials and hyperlinks, and determine the feasibility of developing an online, searchable bibliography on pesticides and breast cancer risk accessible through this Web site.

The work supported by this grant is scheduled to begin in fiscal year 1997. The appropriation requested for fiscal year 1997 is \$100,000. The non-federal funds and sources provided for this grant were as follows: \$150,000 state appropriations for fiscal year 1996; \$250,000 in state funds (New York) has been requested for fiscal year 1997.

This research will be conducted at the Cornell University, Ithaca, New York. This is a new project—not yet funded—scheduled to begin in April 1997. The anticipated completion date is March 31, 1998. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

As a new project, an evaluation has not been conducted, although the proposal is currently under review. Periodic progress reports are made throughout the year. A final evaluation will be made after March 31, 1998.

EXPANDED WHEAT PASTURE, OKLAHOMA

This project was designed to develop improved supplementation programs and new systems for technology delivery to reduce production risk of raising cattle on wheat pasture. The work involves evaluation of grazing termination date on grain

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and beef production, assess the impact of wheat cultural practices and develop an economic model to evaluate alternative decisions on grain/beef production. Additional effort is directed toward development of cool season perennial forage grasses to complement wheat pasture. The proposal for fiscal year 1996 has been received and is being processed. The principal researcher believes that this work addresses the needs of wheat/cattle producers of Oklahoma as a primary focus. However, it would appear to have some application regionally in adjacent states. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research. The principal researcher suggests the research will indicate mutual benefit to wheat grower and livestock producer.

The original goal of this research was to develop economically viable management systems for use of wheat for supplemental pasture for beef cattle before the crop starts making grain. This work has already shown how the use of feed supplements can increase net profit from cattle grazing on wheat pasture. The study has identified management practices, e.g. date of planting, cultivar selection, grazing intensity and date of cattle removal that produce the optimum grain yield and cattle gain. A Wheat/Stocker Management Model has been developed as a decision aid to help producers assess income risk in the operation. Work is underway on a Wheat Grazing Systems simulation model.

The work supported by this grant began in fiscal year 1989 and appropriations were as follows: fiscal year 1989, \$400,000; fiscal year 1990, \$148,000; fiscal year 1991, \$275,000; fiscal years 1992-1993, \$337,000 per year; fiscal year 1994, \$317,000, and fiscal years 1995-1997, \$285,000 each year. A total of \$2,669,000 has been appropriated.

The nonfederal funds and sources provided for this grant were as follows: \$175,796 state appropriations in 1991; \$174,074 state appropriations in 1992; and \$236,584 state appropriations in 1993. The non-federal support for 1994 was \$238,058 for state appropriations. Funds for fiscal year 1995 were \$275,426, and for 1996 were \$120,000.

The research is being done at Oklahoma State University. This project started in 1989 with a projection of 10 years to complete the research objectives. Some objectives are nearing completion while others will probably require further study. A number of wheat cultivars have been identified which will tolerate grazing and still produce economic grain yields. The grazing cut off date for grain production has been established. However year to year variation need additional study in order to develop a reliable decision support system. In keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula funds.

This program has not been subjected to a comprehensive review. However, each year's funding cycle is reviewed internally and by CSREES scientist for scientific merit and relevance.

EXPERT IPM DECISION SUPPORT SYSTEM

A prototype information and decision support system was developed in collaboration with Purdue University and the Department of Energy's Argonne National Laboratory that integrates and manages information from multiple data sources. Information on the status of, EPA review of pesticides, losses caused by pests, status of alternative tactics, status of minor use registrations, current research in progress, and priorities of IPM implementation teams are integrated in the Pest Management Information Decision Support System (PMI/DSS). Information on the genetic resistance of pests has been planned with Michigan State University but the resources to implement the plan have not been available to date. With the information in the current data base, commodity/pest problems are prioritized using a science-based logic developed by Argonne National Laboratory personnel based on key policy concerns. The need for decision support and information is greater than in the past with the passage of the Food Quality Protection Act [FQPA] of 1996. The act requires the Environmental Protection Agency (EPA) to place greater reliance on science, dietary exposure to pesticides, reasonable risks, and emphasis on children's diets and exposure. The Act also recognizes IPM as helping to provide workable solutions to pest problems. The decision support system is incorporating increased information to address these needs. The data fields and sources of the data bases that will contribute to additional information are: Risk Assessments (EPA), Registered Alternatives by Commodities for Pesticides Under EPA Review (EPA Registration Tapes), Critical Pest Problems with Removal of Suspect Pesticides (State IPM

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Teams and NAPIAP State Liaison Coordinators; Commodity Groups), State Crop Production (U.S. Census), Pesticide Tolerances on Commodities (EPA Data Bases), Market Basket Residues on Commodities (AMS and EPA Analyses), Dietary Habits of Adults and Children (1977 data base, and data bases to be developed), Method of Use and Reduction of Risk (State IPM Teams and NAPIAP State Liaison Coordinators; Commodity Groups), IPM Dependence (State IPM Team Data Bases).

The PMI/DSS serves national, regional, and local needs for research and extension activities. At the national level, the system supports the USDA/USEPA Memorandum of Understanding (MOU) to find alternatives to pesticides under regulatory review or being lost due to genetic resistance. The data base has identified priorities for the Pest Management Alternatives request for proposals for the past two years and interacts with the project system of the IR-4 Minor Use Registration Program. It also is interacting with the identification of priorities for research and extension activities in the regional IPM Special Grant and Special Projects. It provides a mechanism for growers and grower organizations to interact with the priority process and the ultimate result is to help insure that farmers have alternatives for managing pests at the specific local level.

The goal of the PMI/DSS is to refine the process to identify IPM needs of USDA, EPA, and states by addressing critical needs, reinforce state and federal partnerships to disseminate important pest management information for improved decision making, profitability, and environmental quality, and to address future applications and needs. In 1996 and 1997, the program addressed priority commodity pest management needs due to voluntary pesticide cancellations and regulatory cancellations responding to the MOU and supplemental MOU between EPA and USDA. The supplemental MOU was signed in April, 1996, at which time there were 58 pesticides and 374 uses identified and prioritized. The process included information on cancellations furnished by EPA, selected uses were sent to the states NAPIAP and IPM network and impacts of cancellations effecting individual state agriculture reported back for compilation in the decision support system. The results were used in the 1996 and 1997 request for proposals for the Pest Management Alternatives Program. Twenty-five minor commodities on which 40 specific pest were identified in the 1997 request for proposals. This was the first time that we have identified specific commodity/pest combinations for which proposals were limited. Results were also used by the regional IPM request for proposals. As previously stated, the program is currently addressing issues associated with the FQPA which increases the information requirements significantly.

In fiscal year 1994, we expended \$40,000 of CSREES administrative funds and \$90,000 from Science and Education Evaluation Funds to initiate collaborative work with the Argonne National Laboratory. In fiscal year 1995, we expended \$172,000 as a Cooperative Agreement with Purdue University and Argonne National Laboratory from the Pest Management Alternative Special Grant Funds and \$5,000 from NAPIAP funds. In fiscal year 1996, we expended \$177,000 in a cooperative agreement with Purdue University and Argonne National Laboratory from Pest Management Alternative Special Grant Funds, \$21,000 from Research, Extension, and Education Evaluation Funds, and \$40,000 from NAPIAP funds (for development of NAPIAP data fields). In fiscal year 1997, we are expending \$165,425 to Purdue University and Argonne National Laboratory. The total resources to date are \$710,425.

It is difficult for us to estimate the amount of non-federal funds supporting the Pest Management Information, Decision Support System. Purdue University and Cornell University have contributed non federal resources to the oversight of the information, decision support system as well as a number of states that have provided information that is part of the information base. Many program areas are contributing data bases that are run on the Pest Management Information, Decision Support System.

The bulk of the work is carried out in Washington, D.C. CSREES has National Program Leaders in IPM, NAPIAP, and IR-4 program areas working on the Pest Management Information, Decision Support System. The Argonne National Laboratory has a Washington, D.C. office where information, decision support personnel are housed and there are daily interactions between CSREES and other USDA staff personnel on a daily basis. Interactions and information is provided by every state in our system. We are in the process of institutionalizing this program by hiring and assigning dedicated staff to this area.

Our original estimate was two-to-three years with adequate resources to complete the developmental work. However, the design considerations become more complex as program needs dictate expansion of the information base such as the developments under FQPA. In addition, the technology is moving so swiftly that we must continue to do updating. We feel we are reasonably meeting our objectives with re-

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sources that are available. As indicated, we are institutionalizing this activity and it will become an ongoing activity of the agency of increasing importance.

We have a guidance committee that gives us input on an ongoing basis. We conduct an annual evaluation of this progress in this program. A specific technical evaluation was made of the Toulmin-based logic which is policy-question driven that under lines the design and decision support process in fiscal year 1996. It was concluded that this science-based logic has significant relevance to decision making in agricultural pest management systems. We are currently developing plans for an intensive outside review of the system and proposed directions involving personnel in participating program areas, research and extension partners, and grower organizations. The review includes World Wide Web activities and evaluation input from a wide community of users and potential users.

FARM AND RURAL BUSINESS FINANCE, ILLINOIS AND ARKANSAS

The long-range plan of work for this program focuses on three principal areas. One is the financial management and performance of rural businesses which includes on-going research into financial management and decisionmaking by farm and agribusiness firms complemented by evaluation of the performance of existing firms and training programs for farm and rural business owners. The second area includes research on financial markets and credit institutions serving rural America with emphasis on pricing and credit evaluation of loans, evaluation of credit relationships, identification of key factors affecting the supply and demand for financial capital, and evaluation of financial innovations for farm and rural business finance. The third area addresses the impact of public policies and programs on the financial health of rural America, measures the effect of regulatory changes on the performance of financial institutions, evaluates organizational alternatives for rural credit markets and analyzes the effects of geographical liberalization of commercial banking on structure and performance. The principal researcher believes traditional characteristics of agriculture such as capital intensive businesses, variable prices and production and seasonality present unique risks with important implications for the cost and availability of financial capital for farm and rural businesses. In the present uncertain policy and budget environment, identification of new sources of financial capital and innovative programs are essential to enhance the financial capacity for undertaking rural development programs and responding to growth opportunities in rural businesses. In view of significant needs for research in high priority national interest topics, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research.

The goal is to assist farmers and rural businesses with research-based information on financial management as they deal with changing and increasingly complex financial markets. The program has completed projects on the financial structure and efficiency of grain farms, risk and financial implications of vertical coordination in hog production, commercial bank access to agency market funds through government sponsored enterprises, and competitive challenges for bankers in financing agriculture. Additional projects in various stages of completion include investigate the financial implications of property tax reform at the State level and investment options for farmers and businesses during high income periods. Other projects weigh regulatory costs in rural lending, conduct statistical analysis of Chapter 12 bankruptcy filing data, and identify determinants of the type and terms of leases used in agriculture.

The work has been underway since 1992. Appropriations were \$125,000 in fiscal year 1992, \$125,000 in fiscal year 1993, \$118,000 in fiscal year 1994, and \$106,000 in fiscal year 1995 through fiscal year 1997. Appropriations through fiscal year 1997 total \$686,000.

The non-federal sources and funds provided for this program in fiscal year 1992 totaled \$259,427 with \$58,427 in State appropriations, \$189,000 from industry and \$12,000 from miscellaneous sources. In fiscal year 1993, the total was \$287,890 with \$94,588 in State appropriations, \$133,000 from industry and \$25,000 from miscellaneous sources. In fiscal year 1994, the total was \$391,000 with \$221,000 coming from State appropriations, \$45,000 from industry and \$125,000 from miscellaneous sources. In fiscal year 1995 the total was \$185,000 where \$46,000 came from State appropriations, \$62,500 from industry and \$76,500 from miscellaneous sources. In fiscal year 1996, the total was \$344,000 where \$294,000 was appropriated from State sources and \$50,000 from private sources. In fiscal year 1997, \$177,000 is being appropriated from State sources.

The work is being carried out at the University of Illinois and University of Arkansas. The original objectives of the program were amended with additional fund-

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ing and new termination dates which now extend to fiscal year 1998. While many of the objectives have been met, the principal researcher believes that new dimensions of the originally proposed objectives need to be addressed as a result of changing conditions and new financial environments. Anticipated completion date of these related objectives will extend into fiscal year 1998. In keeping with the Administration's policy of awarding research grants competitively, no further Federal funding is requested for this grant. Research could be continued at the State's discretion using formula funds.

The project is evaluated with the submission of the annual proposal and as progress reports are received. The program has supported projects which cover topics involving farm and rural business finance. During this past year, the projects have been responsive to the changing policy and financial risk environment including the examination of financial impacts of vertical coordination in the livestock industry and impacts of structural change within the rural finance sector. Evaluation of the program considers methodologies used to conduct specific projects, the impact the projects have on current issues, and products resulting from the projects.

FLORICULTURE, HAWAII

The research carried out with these funds involves wholesale and retail US and Japan market research, development of new varieties for aesthetic values and pest resistance, and pest and disease management strategies to meet quarantine needs and consumer expectations. The researcher believes the tropical cut flower and foliage industry in Hawaii, which includes antilurium, orchids, flowering gingers, bird of paradise, heliconia, protea, and cut foliage—ti leaves and other greens—is worth over \$50 million primarily in out-of-state sales. Development of disease resistant cultivars and quarantine pest and disease management strategies which reduced pesticide usage are included in the national high priority improved pest management systems. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research.

The original goal of the research was to develop superior Hawaii anthuriums, orchids, protea, and exotic tropical flower varieties with disease resistance, particularly to anthurium blight which devastated the Hawaii anthurium industry through the mid-1980's and reduced Hawaii's market share. Additionally, research focused on development of post-harvest handling practices and quarantine pest control. To date, a new anthurium cultivar has been patented and released. Additional blight resistant cultivars are being propagated and tested by the anthurium industry. Disease resistant protea germplasm has been obtained from South Africa and is being used in the protea breeding program. A post-harvest hot water dip treatment has been developed and is being used commercially on tolerant cutflower species to meet quarantine requirements.

Grants have been awarded from funds appropriated as follows: fiscal year 1989, \$300,000; fiscal years 1990–1993, \$296,000 per year; fiscal year 1994, \$278,000; and fiscal years 1995–1997, \$250,000 each year. A total of \$2,512,000 has been appropriated. The non-federal funds and sources provided for this grant were as follows: State appropriations of \$87,937 in 1995 and \$87,937 in 1996.

Research is being conducted by the University of Hawaii at Manoa and Hilo. The objectives in the original project were to maintain Hawaii floricultural industry competitive. This objective continues to be the principal direction for the projects. Because the industry and the markets are changing, pests are becoming either resistant or newer strains, and quarantines are changing with technology the objective remains valid. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the state's discretion using other funds.

The individual projects funded under this Special Research Grant are evaluated through merit review to ensure that good science is being used. This evaluation is the major tool used to award funds to the projects.

FOOD AND AGRICULTURE POLICY INSTITUTE, IOWA AND MISSOURI

The Food and Agriculture Policy Research Institute (FAPRI) was established by Iowa State University and the University of Missouri, Columbia, in 1984. The purpose of the institute is to conduct comprehensive analyses and disseminate results about the economic impacts of U.S. food, farm, and trade policies to agricultural producers, agribusinessmen, and public policymakers. Iowa State conducts research on the economic interrelationships within and between domestic and foreign food and agricultural markets from the farm gate to market destinations; develops and main-

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tains databases and analytical support systems to facilitate the analysis of agricultural and trade policy issues; and evaluates the impacts of U.S. and foreign commodity supply, demand, and public policy programs on agricultural trade. The University of Missouri maintains models of the domestic agricultural economy and directs its efforts primarily to the analysis of domestic policy issues. The two universities maintain linkages with a number of other universities who provide data and analytical support to the system. The universities maintain a comprehensive analytical modeling system of the U.S. and international food and agricultural sectors to evaluate near-and long-term economic implications of alternative farm policies for the basic commodities. The system is capable of providing economic information on potential impacts out to 10 years in the future of farm policies on farm prices, income, output, government program costs and means to enhance the management of farm programs at the national level.

The Nation's agricultural sector and its components are subject to numerous Federal policies and programs. FAPRI is the only publicly supported, non-federal organization with the analytical capability to assess and evaluate the numerous public policies and programs affecting the agricultural sector and report results to a broad constituency including farmers, agribusinessmen, and Federal and State policymakers. However, in view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other formula funding could be used to support this research.

The original goal was to develop the analytical capability to assess farm policies on the U.S. agricultural sector and disseminate this information to farmers, agribusinessmen, and public policymakers. The mission has been expanded to include assessment of trade and environmental policy impacts and their interaction with the agricultural sector at national, regional, and farm levels. The models in place are also used to assess fiscal and monetary policy implications and impacts of new technologies such as biotechnological innovations on the agricultural sector. Both institutions maintain large econometric models and data sets which are regularly updated to analyze farm and trade policy alternatives and the impacts of various programs on the several sub sectors of the agricultural economy. During the past year, the FAPRI completed over 45 studies addressing policy issues such as assessments of the 1996 Farm Bill and alternative ways of implementing its provisions. Numerous studies were completed addressing improvements made to the empirical modeling system to improve domestic and international policy capabilities. The FAPRI professionals made numerous public appearances throughout the U.S. to agricultural groups and Congressional committees and Executive branch groups addressing policy issues. New thrusts include development of two new baselines to complement the existing agricultural baseline used for agricultural policy analysis. These are the resource and environmental baseline and the food-nutrition-health baseline. Completion and incorporation of these baselines into the existing model framework will provide an integrated procedure to assess environmental and health policies on the agricultural and food sectors and implications of agricultural policies on the environment and public health.

Grants have been awarded from funds appropriated as follows: fiscal years 1984–1985, \$450,000 per year; fiscal years 1986–1987, \$357,000 per year; fiscal year 1988, \$425,000; fiscal year 1989, \$463,000; fiscal year 1990, \$714,000; fiscal years 1991–1993, \$750,000 per year; fiscal year 1994, \$705,000; fiscal years 1995–1996, \$850,000 each year, and fiscal year 1997, \$80,000. The total amount appropriated is \$8,671,000.

The non-federal funds and sources provided for this grant are as follows: \$260,355 State appropriations, \$113,565 industry, and \$37,913 miscellaneous for a total of \$411,833 in fiscal year, 1991; \$321,074 State appropriations, \$51,500 industry, and \$35,100 miscellaneous for a total of \$407,674 in fiscal year 1992; \$234,796 State appropriations and \$70,378 industry for a total of \$305,174 in fiscal year 1993; \$78,286 State appropriations, \$43,925 industry, and \$29,750 miscellaneous in fiscal year 1994 for a total of \$151,961; \$80,155 State appropriations, \$37,128 industry, and \$42,236 miscellaneous for a total of \$159,519 for fiscal year 1995; \$124,123 in State appropriations with no other funding for fiscal year 1996; and \$79,000 in State appropriations, \$50,000 industry and \$25,000 miscellaneous for a total of \$154,000 in fiscal year 1997.

The program is carried out at the Center for Agriculture and Rural Development, Iowa State University and the Center for National Food and Agricultural Policy, University of Missouri. This is a continuing program of research and analysis for the purpose of assessing farm and related policy actions and proposed actions likely to affect the agricultural sector and its components. However, in keeping with the

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Administration's policy of awarding research grants competitively, no further Federal funding is requested for this grant.

We have conducted no formal evaluation of this program. However, the project proposal is carefully reviewed for adherence to stated objectives and annual progress.

FOOD IRRADIATION, IOWA

Since the Linear Accelerator Facility was placed in operation in March 1993, studies on the effect of irradiation on shelf-life extension, safety and quality of ground beef, beef steaks, ham, pork chops from loins, chicken breasts, and turkey have been conducted. Studies combining irradiation with high hydrostatic pressure and cooking, using whole chicken breasts, turkey and ham, have been conducted to determine the combination of these treatments that will yield a shelf-stable product while maintaining high eating quality. Several studies were conducted to determine whether consumers can detect a difference between irradiated and nonirradiated ground beef patties. Experiments were also conducted to investigate consumer acceptance of pork products irradiated to prevent trichinosis. Test markets of irradiated chicken breasts were conducted to determine consumers' willingness to pay for irradiated products. The principal researcher believes consumers' attention and concern about the safety of fresh meat and poultry has increased with recent outbreaks of foodborne illness from *E. coli* 0157:H7. The meat industry has also expressed interest regarding the quality of irradiated products, and how this process can be used to yield high quality fresh meats that are free of pathogens. With the recent outbreak of illness of thousands of Japanese due to *E. coli* 0157:H7 and the subsequent drastic reduction of U.S. beef exports to Japan, irradiation of beef could have significant economic impact on the nation's export of this high value product. Additionally, researchers from eight other research institutes have used the irradiation facility for research projects. In view of significant needs for research in high priority national interest topics such as improved pest management systems and food safety, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch or other funding could be used to support this research.

The original goal of the research was to generate knowledge necessary to develop a research and technology transfer program leading to commercial use of irradiation of foods, whereby consumers would be provided with food products with enhanced safety. The effectiveness of irradiation, using an electron beam accelerator, in destroying known pathogenic bacteria in pork and beef has been determined. Mathematical models have been developed to predict the growth of bacteria in low-dose irradiated ground pork. Demonstration of irradiation technology has been presented to some commercial firms, and plans are being developed for some large scale test markets.

The work supported by this grant began in fiscal year 1991 when \$100,000 was appropriated for this project. The appropriations for fiscal years 1992 and 1993 were \$237,000 per year; fiscal year 1994, \$223,000; and fiscal years 1995-1997, \$201,000 each year. A total of \$1,400,000 has been appropriated.

The project received \$1,037,270 in State of Iowa funds—\$1 million of which was for capital construction—in fiscal year 1991; \$37,942 in state funds and \$67,800 in industry grants in fiscal year 1992; \$68,897 in state funds, \$78,300 in industry grants and \$9,666 in user fees in fiscal year 1993; \$70,652 in state funds, \$35,420 in industry grants and \$47,788 in user fees in fiscal year 1994; and \$72,772 in state funds, \$100,000 in industry grants and \$55,211 in user fees in fiscal year 1995; and \$81,540 in state funds, \$115,300 in industry grants.

Research is being conducted at Iowa State University. The principal investigator anticipates that the project will continue through June 1998. Since irradiation continues to be viewed skeptically by many non-scientists as a tool for improving shelf-life and preserving food, and because optimal dose and use parameters are still being defined, additional research will be needed to move this technology to broader consumer acceptance and industry use to enhance safety of food products. Until irradiation of red meat is approved by the Food and Drug Administration, research on the factors affecting the quality of irradiated red meat will be primarily conducted using the Iowa State University facility. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula funds.

An agency science specialist conducts a merit review of the proposal submitted in support of the appropriation on an annual basis. A review of the proposal was conducted on December 20, 1996. Previous studies funded under this project have provided useful information toward understanding how irradiation can be useful in

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eliminating or reducing foodborne pathogens in meat products. It is anticipated that the proposed research will continue to further the understanding of how irradiation can be used to improve shelf-life and enhance safety of meats and meat products.

FOOD MARKETING POLICY CENTER, CONNECTICUT

The Food Marketing Policy Center was established in 1988 at the University of Connecticut at Storrs. The Center conducts interdisciplinary research on food and agricultural marketing and related public policy issues that influence economic performance of the food marketing system. The Center studies how public policies and private sector organization and strategies affect food industry competitiveness and the delivery of food and services, their costs, prices, and safety. The Center works closely with the University of Massachusetts to carry out the research program. The research proposal identifies an ongoing national need to continually improve the economic efficiency and operation of the U.S. food marketing system to benefit farmers, merchants, and consumers. In view of significant needs for research in high priority national interest topics such as improved pest management systems and food safety, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research.

The ongoing research goal is to identify marketing problems and assess alternatives that improve economic performance of the U.S. agricultural and food marketing sector. The Center conducts research in conjunction with the Hatch regional research project NE-165, "Private Strategies, Public Policies and Food System Performance." The Center performs studies on food marketing, including a description of food quality issues and enhancement policies; private label food brands; advertising strategies of agricultural cooperatives; assessment of food retailing mergers and competition; and evaluation of state dairy regulations, branded product marketing strategies, supermarket chain entry, oligopsony in agricultural markets, and the impact of agricultural cooperatives on food processor market performance. The Center develops analytical methods to assess market performance. It has sponsored workshops on industrial organization issues. Food safety economic issues are addressed in two books and at workshops that summarize research done at the center and the regional research project.

This grant will be used to support research on 12 projects with research targeted at three problem areas. They are factors shaping decisions by food firms and the consequent effects; impact assessment of public intervention on firm food safety and quality strategies; and analysis of public policies affecting competition in food markets. Projects include analyses of the effects of trade agreements on food quality and trade in food products; an assessment of the efficiency aspects of ex ante versus ex post approaches to food safety problems; firm strategic responses to food safety and nutrition regulation and effects on competition, market structure and food price levels; demographic patterns of food borne illness for high risk populations; market structure on food advertising activity; competitive strategies of cooperatives; basic research on oligopoly theory; and publication of new data sets on the food industry.

Grants have been awarded from funds appropriated as follows: fiscal year 1988, \$150,000; fiscal year 1989, \$285,000; fiscal year 1990, \$373,000; fiscal years 1991-1993, \$393,000 per year; fiscal year 1994, \$369,000; and fiscal year 1995 through 1997, \$332,000 each year. A total of \$3,352.00 has been appropriated. The non-federal funds and sources provided for this grant are State appropriations as follows: \$234,259 in fiscal year 1991; \$231,741 in fiscal year 1992; \$201,288 in fiscal year 1993; \$234,557 in fiscal year 1994; \$219,380 in fiscal year 1995; and \$134,399 in fiscal year 1996.

The research is being carried out by the Connecticut Agricultural Experiment Station at Storrs and at the University of Massachusetts. The original proposal in 1987 was for 24 months. The objective of conducting policy-oriented research on food manufacturing and distribution industries to assist state and Federal policy decision makers in improving the performance of the food system is still an ongoing public concern, given increasing levels of concentration in food processing according to the principal researcher. The current phase, as funded in fiscal year 1997, will be completed in 2001. However, in keeping with the Administration's policy of awarding research grants competitively, no further Federal funding is requested for this grant. Research could be continued at the state's discretion using formula funds.

CSREES annually reviews project reports, succeeding annual project proposals, research studies and educational programs.

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FOOD PROCESSING CENTER, NEBRASKA

The University of Nebraska Food Processing Center has been conducting short-term, highly applied research projects to assist small and mid-sized food processing companies and entrepreneurs to develop or improve processes and products and to develop new food processing enterprises. Projects were selected based on the estimated economic impact of the technical assistance or the criticality of the technical assistance to the future of the firm or venture. Priorities were placed on projects relating to the safety of the food product or process and to the fulfillment of regulatory mandates such as nutrition labeling, use of approved and effective ingredients, and adherence to regulations imposed by foreign governments. In addition, several research projects were conducted to improve or assess the quality, extend the shelf-life, or assess or improve the processing efficiency of specialty food products which impacted several processors or used alternative agricultural products. The principal researcher believes the primary impact of this project will be state-wide. Small and mid-sized food processing companies and entrepreneurs have limited technological capabilities for addressing issues related to product development, process development, product and process evaluation, food safety, quality assurance, and regulatory mandates. The short-term research and technology transfer projects conducted as part of this overall project will aid these companies in appropriately addressing these oftentimes complicated issues. In view of significant needs for research in high priority national interest topics such as improved pest management systems and food safety, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research.

The goal of the research, as stated previously, is to assist small and mid-sized food processing companies and entrepreneurs to develop or improve processes and products and to develop new food processing enterprises. Technological evaluations were conducted for 210 individuals or companies interested in developing new food processing businesses. These evaluations included formulations, processes, processing equipment, packaging, shelf-life, sensory, nutritional attributes, microbiological quality, regulatory considerations, and other factors. Additionally, microbiological analyses, shelf-life assessments, sanitation audits, and nutritional analyses were conducted for numerous Nebraska food companies.

The work supported by this grant began in fiscal year 1992. The appropriations were \$50,000 per year for fiscal years 1992–1993 ; \$47,000 for fiscal year 1994; and \$42,000 for fiscal years 1995–1997 each year. A total of \$273,000 has been appropriated. The Food Processing Center received \$288,421 in State funds and \$1,303,685 in food industry grants and miscellaneous sources from 1992 through 1996.

Research is being conducted at the University of Nebraska. Because this project supports ongoing technical assistance to clients, the objectives are ongoing. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula funds.

An agency science specialist conducts a merit review of the proposal submitted in support of the appropriation on an annual basis. A review of the proposal was conducted on December 20, 1996. Progress under previous grants for this project appears to be satisfactory.

FOOD SYSTEMS RESEARCH GROUP, WISCONSIN

The Group conducts research on contemporary issues affecting the organization and competitiveness of the U.S. food system in domestic and international markets. The issues include new technologies, market structure, and government policies and programs. Studies have been completed on pricing of cheddar cheese, fed cattle and hogs; changes in private label product markets; causes of structural change in the flour milling, soybean oil milling, wet corn milling, cottonseed milling, beef packing, and broiler processing industries; competition in U.S. food markets; and the relationship between U.S. food market structure and the industry's performance in global markets. The principal researcher believes that the U.S. food system is changing rapidly in response to a large number of global economic-social-technical changes. Research is needed to determine the effects of these change on the system's organization and performance, and to ascertain needed adjustments in public policies based upon sound research. In view of significant needs for research in high priority national interest topics such as improved pest management systems and food safety, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research.

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The original goal was to conduct research to assess and evaluate the organization and performance of the U.S. food industry and provide recommendations for improvements. The Food Systems Research Group recently completed a study of the National Cheese Exchange which resulted in a major public report, Congressional hearings, and a Wisconsin task force. Alternative pricing mechanisms are being developed to avoid the problems of a very thin market which is used to price a large volume of off-market sales. The group is also examining the impact of "tough competition" policies on industry performance. Deregulation in the United States and privatization in the U.K., Mexico, and Eastern Europe provide empirical bases for evaluating the impact. The Group has completed numerous studies on economic structure and performance issues of the U.S. food manufacturing and distribution system. Basic research is conducted on market theories; effects of mergers, new technologies, and firm conduct on industry structure and organization; factors affecting industry prices, profits, efficiency and progressiveness; and impact of public policies and regulations on food system organization and performance.

Grants have been awarded from funds appropriated as follows: fiscal years 1976–1981, \$150,000 per year; fiscal years 1982–1985, \$156,000 per year; fiscal years 1986–1989, \$148,000 per year; fiscal year 1990, \$219,000; fiscal years 1991–1993, \$261,000 per year; fiscal year 1994, \$245,000; and fiscal years 1995–1997, \$221,000 per year. A total of \$4,026,000 has been appropriated.

The non-federal funds and sources provided for this grant are as follows: State appropriations of \$120,304 in fiscal year 1991; \$119,448 in fiscal year 1992; \$85,188 in fiscal year 1993; \$96,838 in fiscal year 1994; \$100,869 in fiscal year 1995; \$101,272 in fiscal year 1996; and \$112,842 in fiscal year 1997.

The grant supports research at the University of Wisconsin, Madison. The original proposal in 1976 was for a period of 36 months. The current phase of the program will be completed in 1999. In keeping with the Administration's policy of awarding research grants competitively, no further Federal funding is requested for this grant.

CSREES performed a merit review of the project in January 1997 as it evaluated the project proposal for 1997 and concluded that, under this project, researchers conduct unique studies on the structure, conduct and performance of selected segments of the food industry. In spite of the growing concentration in food production-processing and increasing public policy questions concerning the performance of this industry, few organizations are providing the research needed for public and private decision-making. Research results appear in several professional journals and popular press and researchers have ongoing dialog with private and public decision-makers.

FORESTRY RESEARCH, ARKANSAS

The Arkansas Forest Resources Center has offered programs of teaching and research to the landowners of Arkansas and the surrounding region. This has been done through offering continuing education workshops for landowners. The educational thrust has combined Center and private dollars to establish computer software capability capable of use in the education of landowners and students. The Center includes one of only three Arc View learning centers for natural resources. The Center has acquired quality staff, well versed in the use of advanced technologies. Projects address issues of species diversity, richness, redundancy, and the resilience of disturbed and undisturbed hardwood stands. Furthermore, evidence exists that neotropical migratory birds are indicators of ecosystem health. Factors implicated as influencing their breeding range include habitat destruction/alteration, forest fragmentation, etc. Thus, issues of reestablishment and the structure of regenerated hardwood stands are important for timber, non-timber values, and the quality of life enjoyed regionally, nationally, and internationally. These issues will grow in importance as Southern forests assume greater proportions of the national demand for hardwood fiber and wood. The principal researcher believes that with the reduced levels of production of wood products from the Northwest, Southern forests are increasingly bearing the brunt of providing the majority of wood products for the United States. This increased production makes more imperative the appropriate and efficient balance in the use of Southern forests in producing timber and non-timber outputs. This would prevent these conflicts, or at least reduce them significantly. However, with the limited resources available and the possibility that at the discretion of the state, Hatch Act or other funding could be used to support this research, funds are not proposed to continue this Special Research Grant.

Developing alternative forest management strategies for achieving multi-resource objectives; i.e., joint production of timber, wildlife, recreation, and other outputs of the forest on private, industrial, and non-industrial forest lands and public forest

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lands, is the thrust of goal one of the project. In the last year, significant progress has been made in several areas. Some examples include: developing intensive fiber farming systems as alternatives to soybeans for Mississippi farmers, taking the first step toward biological control of the Southern pine beetle by discovering the nutrient needs of predators of the beetle so they can be grown and studied in artificial cultures, and conducting the first survey of nonindustrial landowners in Arkansas for 15 years. The survey shows some areas for concern, such as the fact that the average age of forest landowners is over 60. There will be a massive change in ownership in the next 10–20 years. Landowners continue to not be aware of assistance programs and a concern about government programs and intervention on private land. This is information needed to prepare our institutions for transitions and to design more effective programs. Ongoing projects include a broad array of topics, competitively awarded within the Center, concerned with best management practices, ecological characteristics, effects of different management intensities, streamside buffer zone effectiveness, as well as the efforts mentioned previously.

The work supported by this grant began in fiscal year 1994. The appropriation for fiscal year 1994 was \$470,000 and for fiscal year 1995 through 1997, \$523,000 each year. A total of \$2,039,000 has been appropriated. During fiscal year 1994, more than \$380,000 was funded by forest and related industries and private foundations. For fiscal years 1995 and 1996, these figures were \$815,000 and \$910,000, respectively.

This research is being conducted at the School of Forest Resources, the University of Arkansas at Monticello. The primary project objectives are to be completed by the end of the fifth year of funding, and the specific objectives of each project will be met. Some projects have long-term objectives, typical of forestry research. These projects and objectives will be continued using the infrastructure and capacity developed with these Special Research Grants. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula or other funds.

In 1991, a Cooperative State Research, Education, and Extension Service team visited Monticello and reviewed faculty qualifications, supporting sources, and the feasibility of the proposal. The team exit report indicated the faculty was highly capable, the infrastructure needed strengthening, and the proposal concepts were feasible. Since 1991, there has not been a formal program review.

FRUIT AND VEGETABLE MARKET ANALYSIS, ARIZONA AND MISSOURI

The purpose is to provide timely knowledge of the impacts of trade, environmental, monetary, and other public policies and programs upon the Nation's fruit and vegetable industry to farmers, agribusinessmen, and policymakers through a program of empirical assessment and evaluation. The U.S. fruit and vegetable sector is experiencing increased growth from greater domestic and export demand. However, the growth of this sector depends upon its ability to compete domestically and internationally and to conform with the regulatory environment in which it operates. This program of research provides information to farmers and policymakers on the implications and impacts of various policies and programs. However, in view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research.

The goal is to develop the analytical capability to assess and evaluate public policies and programs impacting the U.S. fruit and vegetable industry and disseminate the results to users. Proposals have been submitted that outline long-range plans and specific projects for funding. Models have been developed for potatoes, fresh market tomatoes, onions, broccoli, lettuce, cauliflower, oranges and apples. This grant will be used to develop models for processing market tomatoes, strawberries, celery, cucumbers and green peppers. Trade models for those commodities with a significant import and/or export sector will also be developed. These models feed in to a larger food and agricultural sector model to support analyses of cross commodity and policy effects.

The work supported by this grant began in fiscal year 1994. The appropriation for fiscal year 1994 was \$329,000, and for fiscal years 1995–1997, \$296,000 each year. A total of \$1,217,000 has been appropriated.

The non-federal finding provided to this grant in fiscal year 1994 was \$50,073 State appropriations and \$11,000 industry for a total of \$61,073; \$21,876 State appropriations and \$36,624 industry for a total of \$58,500 for fiscal year 1995; a total

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of \$62,400 from State and industry sources expected for fiscal year 1996; and approximately \$50,000 from these sources in fiscal year 1997.

The work is being carried out at Arizona State University and the University of Missouri. The university researchers anticipate that work is an ongoing project to look at the impact of various public policy proposals on the U.S. fruit and vegetable industry. However, in keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

We have conducted no formal evaluation. However each annual proposal is carefully reviewed and work progress is compared with prior year's objectives.

GENERIC COMMODITY PROMOTION, NEW YORK

The grant supports, in part, the National Institute on Commodity Promotion Research and Evaluation which provides objective analyses of national and state commodity checkoff programs designed to enhance domestic and export demand. The principle researcher believes that producers are contributing about \$1 billion annually to commodity research and promotion funds designed to expand the domestic and export markets for their products. The number of commodity groups participating and the size of the funds available could continue to grow. There are national and regional needs to ascertain the effectiveness of such programs because of the large number of dollars involved and several questions about their effectiveness. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research. The goal is to determine the economic effectiveness of generic promotion programs designed to increase the sales of agricultural commodities in domestic and international markets. Recent accomplishments include: the impact of promotion and other factors on the sales of almonds, beef exports, pork exports, and wheat exports; development of a major database of commodity advertising expenditures for future research; new methods of measuring advertising wearout; and comparisons of research techniques to determine sensitivity of results based on various methods used.

The work supported by the grant began in fiscal year 1994. The appropriation for fiscal year 1994 was \$235,000 and for fiscal years 1995-1997, \$212,000 each year. A total of \$871,000 has been appropriated. The non-federal matching funds and sources allocated to this grant by Cornell University are as follows: \$97,333 a year in State appropriations for fiscal year, 1994-1996; \$97,333 for fiscal year 1997. Collaborating institutions performing work under subcontract agreements have not provided information.

The work is being carried out at Cornell University in collaboration with eight other land-grant universities. The original proposal in 1994 was for a period of 21 months, however, the objectives for evaluating the benefits of promotion programs is a growing regional and national concern as producers take on greater responsibility for marketing their products. The current phase of the program will be completed in 1998. In keeping with the Administration's policy of awarding research grants competitively, no further Federal funding is requested for this grant.

CSREES performed a merit review of the project in January 1997, as it evaluated the project proposal for 1997, and determined that the project provides leadership for a unique body of research and education on the impact of commodity promotion programs. Research results appear in several professional journals and popular press and researchers have ongoing dialog with private and public decision makers.

GLOBAL CHANGE

Radiation from the sun occurs in a spectrum of wavelengths with a majority of wavelengths being beneficial to humans and other living organisms. A small portion of the short wavelength radiation, what is known as the Ultraviolet or UV-B Region of the spectrum, is harmful to many biological organisms. Fortunately, most of the UV-B radiation from the sun is absorbed by ozone located in the stratosphere and does not reach the surface of the earth. The discovery of a deterioration of the stratospheric ozone layer and the occurrence of an ozone hole over polar regions has raised concern about the real potential for increased UV-B irradiance reaching the surface of the earth and the significant negative impact this could have on all biological systems including man plus animals and plants of agricultural importance. There is an urgent need to determine the amount of UV-B radiation reaching the earth's surface and to learn more about the effect of this changing environmental force. The Cooperative State Research, Education and Extension Service, CSREES, is in the process of establishing a network for monitoring surface UV-B radiation which will meet the needs of the science community of the United States, and which

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will be compatible with similar networks being developed throughout the world. The fiscal year 1996 grant supports work through July 1997. This grant is part of a government-wide initiative. The research is closely coordinated with other Federal agencies involved in the U. S. Global Change Research Program UV-Monitoring Network Plan.

The principal researcher believes destruction of the stratospheric ozone layer, our shield from the full intensity of solar radiation, continues to increase. This creates a high priority need for information to document not only the levels of UV-B radiation reaching the earth's surface, but the climatology of that radiation. The United States, and the rest of the world, needs to know the strength of the UV-B radiation reaching the earth and the potential impact on all forms of life, especially animal and plant life of agriculturally important species.

The principal researcher believes this research to be of national as well as regional and local importance.

The USDA UV-B Network is to provide accurate, geographically dispersed data on UV-B radiation reaching the surface of the earth and to detect trends over time in this type of radiation. A primary problem which had to be overcome in order to reach this goal is the development of instrumentation adequate to make the measurements required for the monitoring network. A major advance occurred during 1996 with the availability to the network of a new multi-band instrument which will provide the spectral information needed to support both biological and atmospheric science research and to serve as ground-truth for satellite measurements. These instruments have been deployed and are currently in operation at ten monitoring sites across the United States. The researchers plan to have twenty sites operational by the summer of 1997. Two grants to design and build advanced spectroradiometers have been awarded under the National Research Initiative Competitive Grants Program. These instruments are to be used in a research network to make precise measurements of the total UV-B spectra at selected sites. The first of these instruments failed to meet spectral performance standards when tested and calibrated by the National Institute of Science and Technology. An alternative design which will result in a much larger and difficult instrument to deploy is currently under development. To gain network experience, broadband instruments along with ancillary instruments have been installed at ten selected field sites and operated for the last 28-36 months. An additional ten sites have been developed during the last 12 months, including those equipped with the new multi-band UV instrument. Data from all sites is transmitted daily to Colorado State University for analysis, distribution and archiving. These data are available, within 24 hours of collection, on the Internet via a World Wide Web Site located in the Natural Resources Research Laboratory at Colorado State University. The Department of Agriculture is also a participant in the development of a central calibration facility located at Department of Commerce facilities in Boulder, Colorado to ensure uniform and acceptable calibration and characterization of all instruments used in interagency UV-B monitoring programs.

The work supported by this grant began in fiscal year 1992, and the appropriation for fiscal years 1992-1993 was \$2,000,000 per year; fiscal year 1994 was \$1,175,000; fiscal year 1995 was \$1,625,000; fiscal year 1996 was \$1,615,000; and fiscal year 1997 is \$1,567,000. A total of \$10,072,000 has been appropriated. The non-federal funds and sources provided for this grant are as follows: \$162,000 state appropriations in 1993; \$183,106 state appropriations in 1994; and \$285,430 provided by Colorado State University in 1995.

Colorado State University is managing the operating network which, when completed, will include all regions of the country. At least thirty sites are planned for the climatological network including sites in Hawaii, Alaska and Puerto Rico in order to provide broad geographic coverage. Ten sites have been operational with broad band instruments for up to three years and it is planned to have at least twenty sites operational with new generation instruments by the summer of 1997. The research level network will begin with the first instrument to be installed at the Department of Energy Solar Radiation site near Ponca City, Oklahoma, as part of the Atmospheric Radiation Measurements field network. As with other weather and climate observations, this network will address an ongoing need for the predictable future. These measurements will provide information on the nature and seriousness of UV-B radiation in the United States and will provide ground truth validation to other predictions of UV-B irradiance.

The agency has assigned two technical staff to continuously monitor activities in the global change research program. A team of three experts in UV-B radiation measurement technology reviewed specifications for the development of the advanced spectroradiometers in July 1996 prior to the procurement of major components of the instrument. A panel of radiation spectra scientists was brought in to

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review data derived from the new multi-band instruments in December 1996 to advise on the interpretation and analysis of data derived from these instruments. Agency staff are in contact with program management on a weekly basis and have visited the program headquarters four times during the last year.

GLOBAL MARKETING SUPPORT SERVICES, ARKANSAS

This grant supports the University of Arkansas Global Marketing Support Services program to provide research and service to agribusinesses. The objective of the university research is to identify potential foreign markets for Arkansas products and to conduct and disseminate foreign market assessment and evaluation studies to agribusiness firms. The principal researcher believes the emerging importance of global trade to the nation's economy and the reduction of trade barriers world-wide presents unprecedented opportunities for cooperative public-private-university research to develop expertise in world markets. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research.

The goal is to develop a university research and service organization to support international trade development activities by local area businesses. Research is conducted to determine the demand for specific Arkansas products in selected countries. Recent results include: twelve "Industry/Company Opportunity Reports" that provided local businesses with information about potential export markets; a report on consumer attitudes in Mexico and Columbia toward imported products; an evaluation of the food system in China, with emphasis on poultry sector; two new fact sheets; and additions to an electronic export information database that is accessed by local firms.

The work supported by this grant began in fiscal year 1994. The appropriation for fiscal year 1994 was \$47,000; and for 1995 through 1997, \$92,000 a year. A total of \$323,000 has been appropriated. The non-federal funds and sources provided for this grant are \$90,000 per year in State appropriations for fiscal years 1994-1996. Private funds also support this grant but an estimate is not available.

This research is being conducted at the University of Arkansas, Fayetteville. The original proposal in 1994 requested funding for a period of 12 months, but the objectives for expanding the export capacity of small to medium-sized agribusiness firms will not be fully met until 1999. In keeping with the Administration's policy of awarding research grants competitively, no further Federal funding is requested for this grant.

CSREES performed a merit review of the project in January 1997 as it evaluated the project proposal for 1997. CSREES scientists are currently working with the university researchers to enhance the 1997 proposal so that it adequately reflects the kind of work being conducted and to address timelines for the initiation of new research and the distribution of results.

GRAIN SORGHUM, KANSAS

This project was designed to address the lack of yield improvement in grain sorghum cultivars, particularly when grown under dryland conditions where a considerable portion of this crop is grown. The research will focus on identification of early maturing lines which will shift more of the production to grain and less to vegetative growth and thereby making more efficient use of the limited water supply. The focus of this research is toward the non-irrigated lands of Kansas where sorghum can produce a grain crop under conditions that would not be possible with corn and is therefore very important in the rotation with wheat. While the research is directed toward Kansas conditions, it would also apply to adjoining states. However, in view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research. The original goal of this research is to identify/develop grain sorghum cultivars that mature earlier with more of the production in grain rather than vegetative growth. This is a new project starting in fiscal year 1997, so no significant accomplishments can be reported at this time.

The work supported by this grant begins in fiscal year 1997 and the appropriation for fiscal year 1997 is \$106,000.

Research will be conducted at Kansas State University. This is a new project starting in fiscal year 1997, so the objectives have not yet been met. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

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The research proposal will be peer reviewed prior to awarding of funds.

GRASS SEED CROPPING SYSTEMS FOR SUSTAINABLE AGRICULTURE

This program was developed to provide management systems for sustainable grass seed production without field burning of the straw residue following harvest which results in adverse air quality problems. Grass seed yields are often significantly reduced the following season if the residue is not burned. Fiscal year 1996 grant proposal has been received and is being processed. The principal researcher believes that according to information provided by technical committees representing researchers and the grass seed industry, the need for this research is to develop sustainable systems of seed production that do not depend on field burning of straw residue. Much of the grass seed for the United States including lawn grasses is produced in the area. Field burning of straw residue creates unacceptable levels of air pollution and yields of some cultivar decline without burning. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research. The original goal for this project is to develop grass seed production systems that do not depend on field burning of straw residue. To date, joint planning by state experiment station administrators and researchers from the three states with industry input for an integrated regional research effort to solve the problem.

The work supported by this grant began in fiscal year 1994. The appropriation for fiscal year 1994 was \$470,000, and for fiscal years 1995–1997, \$423,000 each year. A total of \$1,739,000 has been appropriated. The nonfederal support for this project in fiscal year 1994 was \$266,055, \$298,052 for fiscal year 1995 and \$282,053 in 1996.

The research will be conducted by the three state agricultural experiment stations in Idaho, Oregon and Washington. Completion of the initial objectives was anticipated to take 5 years and therefore should be completed in 1999. In keeping with the Administration's policy of awarding grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula funds.

The entire project is reviewed annually by a steering committee for focus and relevance. The combined proposal is reviewed by CSREES before funds are awarded.

HUMAN NUTRITION, IOWA

This research aims to develop animal and plant foods with nutritionally optimal fat content and to improve utilization of foods containing non-nutrient health protectants, components that may reduce health risks. The research includes human and animal nutrient utilization, consumer food choices, and economic impacts of nutritional optimization of food production and processing. The fiscal year 1996 grant supports research efforts of 25 investigators from six disciplines through June 1997. The research addresses food quality, nutrition and optimal health. Much of the research focuses on improving the nutritional quality of foods important to the economy of the Midwest, while making those improvements economically feasible. This work may be a model for the nation with regards to designing foods to improve human nutrition. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research.

The goal of the Center for Designing Foods to Improve Nutrition, the administrative unit for this grant, is to improve human nutrition and health maintenance by determining how to improve animal and plant food fat content and how to increase availability of health-protectant factors in the human food supply. The research includes food production, processing, consumer choices, biological utilization, and economic impacts. This research has identified soy oils which can be naturally hardened and early results indicate potential feasibility of processing these oils into shortenings, which may provide human health benefits in comparison with chemically saturated vegetable fats containing trans fatty acids. Additional work further verifying the feasibility of production of more highly unsaturated pork fat has also been conducted, with human feeding trials underway. A novel health-protective, cholesterol-lowering component of soy, the isoflavone daldzein, has been identified in a mouse feeding study. Further evidence has been found that oxygenated carotenoids potentially found in processed fruits and vegetables have greater antioxidant ability than the parent carotenoids. This greater antioxidant ability might be expected to decrease cancer and heart disease risk.

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The work supported by this grant began in fiscal year 1991 with an appropriation of \$300,000. The fiscal years 1992–1993 appropriation was \$500,000 per year; \$470,000 in fiscal year 1994; \$473,000 in fiscal years 1995 through 1997. A total of \$3,189,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$293,000 university, \$312,869 industry, and \$14,000 miscellaneous in 1991; \$90,000 state appropriations, \$473,608 university, \$131,160 industry, and \$116,560 miscellaneous in 1992; \$307,500 state appropriations, \$472,081 university, and \$222,267 industry in 1993; \$486,000 university, and \$254,000 private in 1994; \$210,000 university, and \$200,000 private in 1995; and \$613,770 university and \$207,811 private in 1996.

Research is being conducted at the Center for Designing Foods to Improve Nutrition, Iowa State University. The original overall objective to design foods to improve nutrition is continuing to be addressed. A set of related objectives will be completed in 1999. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant requested.

The grant proposal for fiscal year 1996 was subjected to extensive peer review and the recommendations will be incorporated into the proposed renewal.

HUMAN NUTRITION, LOUISIANA

Obesity is a major problem in the United States. This grant, entitled Dietary Fat and Obesity, will help answer three issues about this problem. Is there a specific preference for fat in some people, and if so, how is it controlled? Why do thin people adapt differently to a high fat diet than obese people? How do specific fatty acids in the diet influence body metabolism of lean and obese people differently? Obesity is one of the most important and preventable problems in America today and its prevalence in Louisiana is among the highest in the nation. The results will expand the foundation for setting national dietary guidelines for individual fat intake. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research.

The overall goal of this grant is to identify the basis for the susceptibility to obesity of some people who eat high fat diets and to understand how they differ from those people who are resistant to becoming obese when eating a high fat diet. The first project is aimed at identifying people who eat large amounts of fat and those who eat small amounts of fat. The researchers are taking several approaches to this problem, including specific laboratory tests and evaluations of people in free choice environments. In the second project, they have examined the effect of different levels and distributions of body fat on the way foods with different amounts of fat are used by the body. This will be followed by detailed studies on the processes by which adjustments to changes in body fat are made. The third project will evaluate the effect of different types of dietary fat on the metabolism and response to insulin. These studies have just begun.

The work supported by this grant began in fiscal year 1991 and the appropriation for fiscal years 1991–1993 was \$800,000 per year; for fiscal years 1994–1997 was \$752,000 per year. A total of \$5,408,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$523,100 state appropriations in 1991; \$515,100 state appropriations and \$2,216,606 private in 1992; \$536,100 state appropriations and \$940,000 private in 1993; \$627,000 state appropriations and \$3,775,000 private in 1994; \$546,100 state appropriations and \$3,100,000 private in 1995; and \$1,471,000 state appropriations and \$2,488,000 private in 1996.

Research will be conducted at the Pennington Biomedical Research Center, Louisiana State University. The anticipated completion date for the original objectives is fiscal year 1999. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

The grant proposal for fiscal year 1996 was subjected to extensive peer review, and in December 1996 an on-site panel of researchers evaluated the proposed objectives and experimental protocols. On the basis of the written comments from the reviewers, the proposal for fiscal year 1997 was revised.

HUMAN NUTRITION, NEW YORK

The work focuses on the basic biological roles of selected nutrients and other food components which are expected to increase or fall as consumption patterns move toward dietary guidelines. The objectives are to develop strategies for improving methods to monitor plant-based food consumption; approaches to increase their consump-

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tion by school-aged children; and an integrated analysis of availability, accessibility, and consumption of plant-based foods at the community level. The research will contribute to the knowledge base needed by consumers to make informed decisions, businesses to plan for maintaining the world's most efficient food system, and those who make and implement policies related to agriculture, food and health outcomes as eating patterns shift to predominantly plant-food based diets. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research.

The newly revised dietary guidelines reemphasize expected health benefits from the increased consumption of fruits, vegetables, and grain products. As pointed out in the response to the first question, investigations are carried out at the basic, clinical, and community levels. Brief synopses typifying the accomplishments are reported. Changes in the American diet are expected to alter lipid metabolism by impacting fat levels and composition. Lipoprotein lipase is a pivotal enzyme that regulates lipid metabolism. New understandings about the enzyme were reported. Researchers cloned a larger portion of the human lipoprotein lipase promoter than had been isolated previously. The activity, synthesis and secretion of lipoprotein lipase is decreased ten fold in young fat cells transfected with the hormone leptin, which suggests a new function for this hormone. In addition, investigators demonstrated that fatty acids enhance the differentiation of young fat cells and possible mechanisms are being explored. Work also has been done on strategies for improving the quality of school lunch programs. This work builds on an earlier study which showed the reluctance of children to consume unfamiliar foods to be a significant barrier. A coordinated effort by food service personnel, teachers, and cooperative extension has resulted in a successful program that introduces unfamiliar to school children by a variety of methods, such as the introduction of various ethnic foods as part of lessons on cultural diversity. Another portion of the work focuses on the interrelationships among the factors that influence food choice at the community, family and individual levels. The approach involves a unique integration of research and intervention. Results indicate that use of fruits and vegetables is positively associated with the previous consumption of fresh produce from a home garden; regional, cultural, or family traditions that emphasize these food groups, and health concerns. Limited access to low cost and preferred types of fruits and vegetables, and lack of time and skill for food preparation are significant barriers to consumption. A "Life Course Model of Fruit and Vegetable Choices" has been developed to guide further research and intervention efforts.

Grants have been awarded from funds appropriated as follows: fiscal year 1989, \$450,000; fiscal years 1990-1991, \$556,000 per year; fiscal years 1992-1993, \$735,000 per year; fiscal year 1994, \$691,000; fiscal years 1995-1997, \$622,000 each year. A total of \$5,589,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$154,056 state appropriations and \$2,456 private in 1991; \$238,430 state appropriations and \$60,746 private in 1992; \$19,401 state appropriations and \$22,083 private in 1993; \$202,441 state appropriations and \$1,175 private in 1994; \$296,794 state appropriations in 1995; and \$348,127 in state appropriations and \$39,593 private in 1996.

Research is being conducted at Cornell University, New York. The original overall objective to integrate nutrition goals and food systems is continuing to be addressed. A set of retained objectives will be completed in 1997 and a set of new related objectives are planned for an additional three years. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

The grant proposal for fiscal year 1995 was subjected to extensive peer review, and the recommendations were incorporated into the ensuing experimental designs.

ILLINOIS-MISSOURI ALLIANCE FOR BIOTECHNOLOGY

The Illinois-Missouri Alliance has initiated a competitive grants program in agricultural biotechnology for research in targeted priority areas of need related to corn and soybeans. The scope of interest includes production, processing, marketing, utilization, inputs and support services, along with economic, social, environmental, and natural resource concerns. The Alliance has solicited research project proposals from scientists at Illinois and Missouri and other Midwestern institutions, and have conducted peer reviews for science quality, commercial feasibility and potential economic impact to select the proposals that will be funded. In 1996 the Alliance awarded four research grants at three institutions totaling \$1,012,859. The Alliance

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also issued a second request for proposals and received fifteen proposals which are being reviewed by an external review panel of scientists employed by agribusinesses. The principal investigator has indicated that the goal of the Alliance is the pre-commercial development of emerging biotechnology discoveries for agriculture. The Midwestern region produces more than half of the nation's output of corn and soybean crops, and the principal investigator believes it is critical to domestic food security and United States competitiveness in global agricultural markets. The Alliance is implementing a research strategy that it hopes will generate important biotechnological developments that are rapidly adaptable to unique local soil, climatic and socioeconomic conditions of the region. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research.

Fiscal year 1996 was the second year of funding for the Alliance. The research program focuses on the two major commodity crops, corn and soybeans, as produced, processed and marketed in the Midwest. The goal of this biotechnology program is to fund integrated research and development projects that will lead to specifically defined practical technologies for commercialization. The projects funded in fiscal year 1996 include efforts to: (1) produce soybeans free of phytic acid to improve nutritional value and reduce phosphate pollution, (2) improve the protein quality of corn by increasing its lysine and tryptophan content, (3) increase oil content and change the fatty acid composition of soybeans to add value, and (4) commercialize a fast-acting recombinant baculovirus for control of European corn borer.

The work supported by this grant began in fiscal year 1995 and the appropriations for fiscal years 1995 and 1996 were \$1,357,000 each year, and for fiscal year 1997, \$1,316,000. Thus a total of \$4,030,000 has been appropriated.

The Alliance has not specified a required amount of matching funds, but it is expected that most projects will have commitments for significant direct and in-kind non-federal support. Since Alliance projects are only now getting underway, the exact amount of the non-federal contribution is still unknown. The non-federal contribution is expected to be substantial, and a system for accounting for future non-federal contributions is in place.

The research projects identified for funding in fiscal year 1995 is being conducted at the University of Illinois, the University of Missouri, and Iowa State University. Each project proposal for Alliance funding has a target date for completion. The four initial projects were three-year studies with anticipated completions at the end of fiscal year 1998. Most of the second round of projects are also three-year studies with anticipated completions at the end of fiscal year 1999. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula or other funds.

The Illinois-Missouri Biotechnology Alliance was evaluated for scientific merit by an agency peer review panel on January 7, 1997. The panel recommended approval of the project pending receipt of supplemental information on administrative aspects of the project.

IMPROVED DAIRY MANAGEMENT PRACTICES, PENNSYLVANIA

The research focuses on developing methods to help dairy farmers in the adoption of new technology and management practices which lead to improved dairy farm profitability. The principal researcher believes the local need is the identification and implementation of profit enhancing management strategies for Pennsylvania dairy farms in response to changing market conditions and emerging technologies. The current focus is to develop economically-viable solutions to issues confronting Pennsylvania dairy farmers such as dealing with animal waste in an environmentally-friendly manner, reducing the cost of forage production systems, including grazing systems, and to develop a better understanding of decision processes by dairy farmers. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research.

The original goal of this research remains the same, which is the development of methods to help dairy farmers in the adoption of new technology and management practices which lead to improved dairy farm profitability. A farm management survey is complete and analysis of results is in progress. Farm financial models have been developed and are undergoing field test on selected farms. Workshops to teach elements of business management to dairy farmers have been conducted, and survey

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instruments are in place to monitor effectiveness of workshops. Research is currently underway to develop improved models for nutrient management on north-eastern dairy farms, to evaluate the potential role of intensive grazing systems to replace harvested forage, and to better understand how decisions are made by dairy farm families. Refinements of an expert computer based system to assist dairy farmers in controlling the udder disease, mastitis, is underway. A study to evaluate the induction of lactation on dairy profitability is underway. An additional study to evaluate the impact of improved protein nutrition during late gestation on dairy cow performance has been initiated.

The work supported by this grant began in fiscal year 1992 and the appropriation for fiscal years 1992 and 1993 was \$335,000 per year. The fiscal year 1994 appropriation was \$329,000 and \$296,000 each year in fiscal years 1995–1997. A total of \$1,887,000 has been appropriated. During fiscal year 1992, \$354,917 were from State funds, \$16,000 from Industry, for a total of \$370,417. During fiscal year 1993, \$360,374 were from State funds and \$16,000 from Industry for a total of \$376,374. Information is not available for fiscal years 1994–1996.

Research is being conducted at Pennsylvania State University. The principal researcher anticipated completion of the original objectives by March 1994. The original objectives were met. Availability of continued funding has permitted the institution to develop a competitively awarded grant program within the institution to address priority issues related to management of dairy farms. Proposals are reviewed and ranked by peers in other institutions prior to award. It is anticipated that awards from the fiscal year 1997 appropriation will be complete in September 1999. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

The agency accepts technical review of specific proposals funded by this grant on an annual basis. The overall proposal is reviewed by the agency on an annual basis. In addition, technical staff conducted on-site reviews of the program in 1993 and in 1995. The overall objectives of the work funded by this grant has direct relationship to the development of an Integrated Management System as well as to aspects of animal production systems on animal well-being and impact on the environment. The activities of this grant lie within the mission of USDA and CSREES.

IMPROVED FRUIT PRACTICES, MICHIGAN

This research will involve a multidisciplinary approach to reduce chemical use on apple, blueberry, and sour cherry, three important Michigan fruit crops, and improve the management of dry edible beans and sugar beets. Research will be conducted on crop management techniques and reduced chemical use. The principal researcher believes Michigan's need for this research is to develop and maintain/expand their tree fruit and small fruits industry. There is a need to improve the culture and management of dry edible beans and sugar beets. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research. The planned objectives of the research are to reduce the chemical contamination of the environment from fruit production and improve production practices for beans and beets through multidisciplinary research, including pesticides, and the development of new nonchemical production methods.

The work supported by this grant began in fiscal year 1994. The appropriation for fiscal year 1994 was \$494,000, and for fiscal years 1995–1997, \$445,000 each year. A total of \$1,829,000 has been appropriated. The nonfederal funds and sources provided for this grant in fiscal year 1994 were \$437,338 from state appropriations and \$135,000 from industry, for fiscal year 1995 were \$574,494 from state appropriations and \$127,000 from industry and a total of \$908,969 for 1996.

Research will be conducted at Michigan State University. The anticipated completion date of this project is 1998. The PI's have reported significant progress toward improved cultural practices for these speciality crops which is expected to reduce the need for chemical pesticides. Keeping with the Administration's policy of awarding grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula funds.

This project has not been subjected to a comprehensive review. The annual proposals including all of its sub projects are subjected to CSREES review before they are approved.

INSTITUTE FOR FOOD SCIENCE AND ENGINEERING, ARKANSAS

As the flagship center for the Institute for Food Science and Engineering, the Center for Food Processing and Engineering has as its objectives to facilitate and

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encourage value-added research and improve the efficiency and effectiveness of processing agricultural products. Its research program includes seventeen projects which have been funded and are underway or complete. The Center requires that researchers acquire the financial support of industry to support their research. Thus, five additional research projects have been approved but are awaiting funding from industry. The next request for proposals by the Institute will be issued on April 4, 1997. The Center for Food Safety and Quality, with a mission to conduct research on the safety and quality of foods relative to microbiological and chemical hazards, will be activated during this grant period. The principal researcher believes the Institute will provide technical support and expertise to small and mid-sized food processors that usually do not possess adequate expertise in-house. The economy of the southern region will be improved through the creation of new jobs. The Institute will develop and disseminate scientific information and provide educational programs related to value-added further processing, storage and marketing of food products. In view of significant needs for research in high priority national interest topics such as improved pest management systems and food safety, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research.

The original goal of this research is to establish an Institute of Food Science and Engineering at the University of Arkansas-Fayetteville. As noted in an earlier response, the Institute for Food Science and Engineering and the flagship Center for Food Processing and Engineering were established and several research projects were funded through the Center. Research demonstrated promise for a high pressure water spray to remove phomopsis decay and brown rot tissue from peaches for processing. Considerable progress was made in modifying commercially produced rice hull silicate to create silica gel. Other research results indicated that holding green and ripe peaches in elevated carbon dioxide atmospheres could reduce acidity and decay, possibly allowing fruits to ripen prior to processing without excessive losses to decay. The Institute provided information to new food business entrepreneurs on food regulations, safety, labeling, ingredients, packaging, and financial aspects of starting a food business and on marketing products. Several products were evaluated and specific recommendations made to those entrepreneurs.

The work supported by this grant began in fiscal year 1996, and the appropriation for fiscal years 1996 and 1997 was \$750,000 each year. A total of \$1,500,000 has been appropriated. The non-federal funds and sources provided for this grant include \$184,700 in state funds and \$93,000 from industry in fiscal year 1996, and \$187,357 in state funds and \$166,752 in industry funds in fiscal year 1997. The Institute received, as a donation worth \$200,000 from industry, a trained sensory panel to qualify and quantify sensory properties of foods. Industry has pledged an additional \$109,628 which has not yet been received.

Research will be conducted at the University of Arkansas at Fayetteville. The principal researcher anticipates that work will be completed on the original goals in fiscal year 2005. The goals of this project related to establishing the centers of the Institute are sequential and have not been fully met. The Center for Human Nutrition is scheduled to be activated in 1999. It is expected that objectives related to research and service to food entrepreneurs will be ongoing and require ongoing support. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula funds.

An agency science specialist conducts a merit review of the proposal submitted in support of the appropriation on an annual basis. A review of the proposal was conducted on January 13, 1997. The assessment was that satisfactory progress was demonstrated in meeting the goals of the Institute, noting that the timetable for activating the Center for Food Safety and Quality had been accelerated.

INTEGRATED PEST MANAGEMENT/BIOLOGICAL CONTROL

Research supported by Integrated Pest Management special grants continues to provide a science basis for the development of alternative approaches for managing pests including insects, mites, weeds, plant pathogens, and ectoparasites. Emphasis of the program has been on enhanced natural control. Enhanced natural control emphasizes increased use of biological control, cultural control, and host resistance practices and the management of genetic resistance of pests. Most of the research projects emphasize the development of natural control practices used in conjunction with selective pesticides and biopesticides when pest monitoring programs and pest populations warrant a pesticide application. In recent past years, a limited number of joint research/extension projects were initiated in the North Central Region, and in fiscal years 1996 and 1997, three to four joint projects were funded in each of

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the four regions. The extension component of the joint project, focusing on the education component for implementing new approaches, is funded by extension IPM funds for special projects. These joint projects are having an impact on the entire research community. Researchers are planning for the implementation of research from the beginning and throughout the research.

This research program addresses the national priority to implement IPM on 75 percent of the nations cropland by the year 2000. In particular, the research will provide the tools to take IPM to more bio-intensive levels which will have greater impact on environmental quality and consumer safety while maintaining the agricultural productivity, sustainability of protection practices, and competitiveness of American agriculture. This research program addresses the regional needs. The program is organized by regional competitive grant programs, and the request for proposals address both the national and regional needs and priorities. In the past year, jointly funded research and extension production region commodity teams with grower and private sector participation have identified priority protection needs. This research program addresses local needs. State IPM commodity interdisciplinary teams working with growers and private consultants have identified priority local needs which are addressed in the regional request for proposals. The fiscal year 1997 requests for proposals in all four regions have made measurable shifts in emphasis based on these priority setting activities.

The original goal and current goal is to bring IPM into the 21st Century with a paradigm shift from past sole dependence on pesticides to an emphasis on natural control integrated with selective pesticides and biopesticides when pest population densities warrant their use. The more recent increase in joint research/extension collaboration has assisted bringing the accomplishments of research into implementation reality. It has also provided for better documentation and measurement of impacts of research and extension efforts. All four regions have produced 12 to 15 page brochures documenting the impacts of research and extension efforts. The titles are indicative of the goals: Integrated Pest Management in the North Central States, a sustainable approach to managing crop pests, using a combination of biological, cultural, and chemical tactics that reduce pests to tolerable levels that minimize economic, health, and environmental risks; Integrated Pest Management in the Northeast Region, 1996 update Involving Stakeholders; Integrated Pest Management in the Southern Region, At the heart of Integrated Pest Management is its dual focus on improving profitability and protecting vital natural resources; and Integrated Pest Management in the Western Region. IPM advances on 2530 commodities are described in these brochures.

Grants have been awarded from funds appropriated as follows: fiscal year 1981, \$1,500,000; fiscal years 1982 through 1985, \$3,091,000 per year; fiscal years 1986 through 1989, \$2,940,000; fiscal year 1990, \$2,903,000; fiscal year 1991, \$4,000,000; fiscal years 1992 and 1993, \$4,457,000 per year; fiscal year 1994, \$3,034,000; and fiscal years 1995-1997, \$2,731,000 each year. A total of \$52,668,000 has been appropriated. Non-federal funds are as follows: for fiscal year 1993, state appropriations, \$841,017; product sales, \$33,987; industry grants, \$17,081; and other, \$31,737; for fiscal year 1994, state appropriations, \$2,303,458; product sales, \$77,157; industry grants, \$210,110; and other, \$216,552.

This research is being carried out in practically all of the State Agricultural Experiment Stations. There is a high priority for continuation of IPM research and for collaborative linkages with other research, extension, technology transfer, regulatory, and incentive programs to accomplish the transitions called for in the administration's policy for reducing overall risks from the use of pesticides through integrated pest management programs which lead to more sustainable agricultural production strategies and reduction in the use of pesticides. The future will bring more collaboration between program areas that address pest management building on the increased collaboration between research and extension. Integration is currently focused on the commodity production system. These are highly complex systems involving a network of organizations that impact on the system. Future levels of integration will address whole farm planning where issues of landscape ecology can be addressed and better interactions with water quality programs can take place. The rate of progress will be determined by the availability of resources.

Due to the complexity of the program, evaluations are done at a number of levels. All grants awarded are evaluated by peer scientists in the multiple disciplines comprising IPM. These peer reviews are conducted in the four regional IPM programs. Peer scientists are drawn from regions outside of the region conducting the review. State IPM commodity teams, with growers and private consultants, review plans and priorities for commodities programs. Production region commodity development programs have been reviewed by peer scientists at the national level.

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INTEGRATED PRODUCTION SYSTEMS, OKLAHOMA

This grant focuses on the development of efficient management systems for production of watermelons and blackberries under intensively managed conditions. The work will address biotic and abiotic production components under Southeastern Oklahoma conditions for use in production guidelines. This will include planting densities, fertilizer studies, weed management and insect and disease control. The proposal for fiscal year 1996 has been received and is being processed. The principal researcher believes the need for this research is focused on the local area of Southeastern Oklahoma, an area that is economically depressed and in need of alternative crops to diversify the dominant cow/calf livestock production. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research. The original goal of this research was to develop new and alternative crops to supplement and diversify the cow/calf livestock agriculture of Southeastern Oklahoma with emphasis on horticultural crops. Work to date has shown promise for strawberries, blackberries, cabbage, melons and blueberries. CD-ROM technology transfer to research results to support an expert system will be developed for grower use.

Work supported by this grant started in fiscal year 1984 and the appropriations were: fiscal year 1984, \$200,000; fiscal year 1985, \$250,000; fiscal year 1986, \$238,000; fiscal years 1987–1989, \$188,000 per year; fiscal years 1990–1991, \$186,000 per year; fiscal year 1992, \$193,000; fiscal year 1993, \$190,000; fiscal year 1994, \$179,000; fiscal years 1995–1997, \$16 1,000 each year. A total of \$2,669,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$165,989 state appropriations in 1991; \$160,421 state appropriations in 1992; and \$164,278 state appropriations in 1993. Nonfederal support for 1994 was \$141,850 for state appropriations. Funds for fiscal year 1995 were \$129,552, and for 1996 were \$146,000.

This research is being done at the Wes Watkins Agricultural Research and Extension Center at Lane, Oklahoma, a branch of the Oklahoma State Agricultural Experiment Station. The original objectives of this project were to develop production system for alternative crops with economic potential for southeastern Oklahoma. Each year's funding cycle has address specific crop and management objectives to be completed over two years time. These short term objectives have been met for each of the completed two year projects. However the original objective of developing alternative cropping systems is very long term and has not been completed. In keeping with the Administration's policy research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula funds.

Each of the annual project proposals has been put through the institutions review and is also reviewed by a CSREES scientist before approval. In addition to the annual review of individual proposals, a comprehensive review of the Lane Agricultural Center, where this research is conducted, was conducted in 1993. This review revealed that work supported by this grant is central to the mission of that station and represents an important contribution to the agriculture of the area.

INTERNATIONAL ARID LANDS CONSORTIUM

Fiscal year 1996 was the third year that CSREES funded the International Arid Lands Consortium. The Forest Service supported the program during fiscal year 1993 to develop an ecological approach to multiple-use management and sustainable use of and semiarid lands. Projects that began in 1994–1996 will continue to be funded to address issues of land reclamation, land use, water resources development and conservation, water quality, and inventory technology, e.g. remote sensing. The principal researcher believes the Consortium is devoted to the development, management and reclamation of and semi-arid lands in the United States, Israel, and elsewhere in the world. The International Arid Lands Consortium will world to achieve research and development, educational and training initiatives, and demonstration projects. The current member institutions are the University of Arizona, The University of Illinois, Jewish National Fund, New Mexico State University, South Dakota State University, Texas A&M University, Kingsville. The United States Department of Agriculture's Forest Service works very closely with The International Arid Lands Consortium through a service-wide memorandum of understanding. The IALC's affiliate members include Egypt's Ministry of Agriculture and Land Reclamation Undersecretarial for Afforestation and Jordan's Higher Council for Science and Technology. In view of significant needs for research in high

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priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research.

The original goal of this consortium is to be acknowledged as the leading international organization supporting ecological sustainability of arid and semi-arid lands. To date, 35 projects have been funded, 25 of which are to conduct research and development, 6 for demonstration projects, and 4 for international workshops. Funds approximating \$1.91 million have been used to fund these projects.

International Arid Lands Consortium was incorporated in 1991. Funds were appropriated to the Forest Service in 1993. Additional funds were received during each of the years that followed. \$329,000 has been appropriated from CSREES for fiscal years 1994 through 1997 for total appropriations of \$1,316,000 for the 4-year period.

Members of the International Arid Lands Consortium have provided funds to support the consortium office in Tucson, Arizona, and for printed materials as needed. Each member has provided travel and operations support for semi-annual meetings, teleconferences, and other related activities. In fiscal years 1993-1996, \$60,000 in state appropriations were provided. Industry provided \$84,083 and \$100,000 and \$25,000 in fiscal years 1993, 1995 and 1996, respectively. Amounts are not yet available for fiscal year 1997.

Research is currently being conducted at the University of Arizona, South Dakota State University, Texas A&M University, Kingsville, New Mexico State University, University of Illinois, and several research/education institutions in Israel. Research projects started in 1993 have been completed. The projects started in 1994 and 1996 are expected to be completed within 6 months to 3 years depending upon the nature of the research or demonstration projects. Several demonstration projects were completed and 4 international workshops were held during 1994 through 1996. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

This project is evaluated annually based on an annual progress report and agency participation in the Consortium Board of Directors meeting. The cognizant staff scientist has reviewed the project and determined that the research is conducted in accordance with the mission of the agency.

IOWA BIOTECHNOLOGY CONSORTIUM

This consortium is the focal point for cooperative biotechnology research endeavors between Iowa State University, the University of Iowa and the City of Cedar Rapids, Iowa to develop and test methods to improve wastewater treatment processes for agricultural wastes, and when possible, to convert by-product materials in agricultural wastes into useful new products. The overall objectives of this research are to conduct fundamental and applied research aimed at enhancing the recovery and utilization of byproduct materials through studies involving fermentation, enzyme catalysis and bioprocessing. The expectation is that technologies will be developed from the research to reduce the burden of agricultural bioprocessing wastes on municipal waste management systems and to transform these wastes into commercially viable products. Developments in biotechnology have allowed for the development of improved management systems that increase the capacity and sophistication of agricultural waste processing. These researchers believe that technological breakthroughs are possible to deal effectively with the increasing burden of agricultural wastes and that useful byproduct materials can be recovered and recycled through bioprocessing of wastes, especially fermentation wastes. In view of significant needs for research in high priority national interest topics such as pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research.

The original goals of this project were aimed at enhancing the recovery and utilization of by-product materials arising from new and emerging industries using biotechnology. Recycling agricultural wastes, isolating useful byproducts and developing value added processing remain the primary thrusts of the project. The Consortium has established a network of researchers to assist them in finding uses for the by-product streams as concentrated steepwater and to find methods to concentrate by-products for industrial uses. The Consortium is also making important progress in the bioconversion, biocatalysis, membrane concentration, and bioseparation of fats and carbohydrates.

Grants have been awarded from funds appropriated as follows: fiscal year 1989, \$1,225,000; fiscal year 1990, \$1,593,000; fiscal year 1991, \$1,756,000; fiscal year 1992, \$1,953,000; fiscal year 1993, \$2,000,000; fiscal year 1994, \$1,880,000; fiscal

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years 1995–1996 \$1,792,000 each year; and in fiscal year 1997, \$1,738,000. A total of \$15,729,000 has been appropriated.

Non-federal funds and sources provided for this grant were as follows: \$623,803 from the State of Iowa, \$42,813 from the city of Cedar Rapids in 1991; \$768,287 from the State of Iowa, and \$365,813 from the city of Cedar Rapids in 1992; \$858,113 from the State of Iowa, and \$170,000 from the city of Cedar Rapids in 1993; \$841,689 from the State of Iowa, and \$36,000 from the City of Cedar Rapids in 1994; and \$1,016,505 from the State of Iowa, and \$36,000 from the city of Cedar Rapids in 1995.

Research is being conducted at Iowa State University and the University of Iowa, in collaboration with the City of Cedar Rapids. The Consortium was originally formed between the City of Cedar Rapids and the participating universities to assist the City in dealing with wastes associated with corn and oat processing and milling, biocatalysis to produce high-fructose syrups, and one of the largest fermentation facilities in the world. No firm date was established to complete this work. The researchers have worked closely with the City and the industries generating these wastes and have made significant progress in analyzing the waste streams and in devising laboratory procedures for extracting useful products. The City of Cedar Rapids is planning to invest funds from other sources in special waste treatment facilities to conduct large scale tests of new treatment methods. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

The Iowa Biotechnology Consortium was evaluated for scientific merit by an agency peer review panel on January 7, 1997. The panel recommended approval of the project pending receipt of supplemental information. The Consortium was also featured in a biotechnology special grant seminar hosted by the agency on December 16, 1996 at which the principal investigator presented research progress and highlights to an audience of agency scientists, administrators, and awards management staff.

JOINTED GOATGRASS

Research is being conducted on control systems for jointed goatgrass in wheat production including integrated cultural management, seed bank studies, and modeling for management conducted as sub-projects by several states. The premier research project continues to be an "Integrated Management" study being conducted across states in the Midwest and west. In this study, jointed goatgrass management is being evaluated based on planting dates, planting density, economic thresholds, and competitive varieties. Research is also being conducted on crop rotations, biological control, seed production and spread, and the development of computer-based decision aids. All funded work has a technology transfer plan and a national coordinator for technology transfer to insure that growers are fully informed about all options for managing this devastating weed. The National Technology Transfer Coordinator has been hired, with the concurrence of a steering committee, and that person is housed at the University of Nebraska. To maximize cooperation among scientists, an annual meeting is held among all investigators and the national steering committee to strengthen collaborations and optimize the distribution of limited funds.

Jointed goatgrass infests nearly five million acres of winter wheat in the west and Midwest and is spreading unchecked. It costs U.S. wheat growers an estimated \$145 million annually. Control of jointed goatgrass in wheat is impossible with current methods because its seed survives in the soil for five or more years. Jointed goatgrass has increased rapidly in the past 20 years because of the widespread adoption of conservation tillage systems. Jointed goatgrass proliferated in such reduced tillage systems, and it seriously impedes the universal adoption of such practices. The research involves scientists from other states. In view of significant needs for research in high priority national interest topics such as pest management systems, funds are not proposed to continue the Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research. The principal researcher and the National Wheat Growers Association believe this research is of national and regional importance.

The goal of this project is to reduce the devastating effect of jointed goatgrass on wheat production and quality and to prevent its continued spread into new, non-infested areas. A jointed goatgrass population model has been constructed including a post-harvest (fall) seed bank, spring seed bank, and fall and spring germination, seeding mortality, mature plants and seed production. The underlying jointed goatgrass population model has been constructed with a vision that the weed management strategies are going to be long-term in nature and be focused on the impact of crop rotation, tillage and weather on jointed goatgrass population dynamics.

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The work supported by this grant began in fiscal year 1994. The appropriation for fiscal year 1994 was \$329,000, and for fiscal years 1995–1997, \$296,000, each year. A total of \$1,217,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: for 1994, \$82,198 state appropriations, \$82,256 from industry, and \$14,871 miscellaneous; for fiscal year 1995, \$67,442 state appropriations, \$38,496 from industry and \$13,304 miscellaneous; and for fiscal year 1996, an estimated \$70,000 state appropriations, \$50,000 from industry, and \$14,000 miscellaneous.

The research is being conducted by University scientists in the states with serious infestations including Washington State University—the principal coordinating institution—Colorado, Kansas, Nebraska, Oklahoma, Utah, Oregon, Idaho, Montana, Wyoming, and South Dakota. The project was initiated to accomplish significant results in about five years. The original objectives are being met, and the researchers anticipate that the original work may be completed in fiscal year 1999. Keeping with the Administration's policy of awarding research grants competitively, no further funding for this grant is requested.

Each year the grant is peer reviewed and reviewed by CSREES's senior scientific staff.

LANDSCAPING FOR WATER QUALITY, GEORGIA

The project is a comprehensive multi-institution, multi-agency, private producer partnership directed by the University of Georgia. The researchers believe it will lead to development of management and siting guidelines for animal agriculture based on landscape and watershed scale environmental quality considerations. Participating institutions and agencies are the University of Georgia, the Joseph W. Jones Ecological Research Center, the Middle South Georgia Soil and Water Conservation District, the USDA Agricultural Research Service, the USDA Natural Resources Conservation Service, the USDA Cooperative State Research, Education, and Extension Service, and the Georgia Department of Natural Resources. Growers from Brooks and Thomas counties, Georgia are key partners in the project. The multidisciplinary research team believes that the efficiency of modern confinement-based livestock feeding and production facilities and prevailing economies of scale have led to concentration of these facilities in several regions of the United States, including the Southeast. This regional concentration of animal production and processing has frequently led to degradation of regional water quality resulting from the excessive discharge of nutrients, organic matter, and pathogens to receiving waters. One factor contributing to these problems in the Southeast has been the historical concentration of animal processing and confinement production facilities in regions with inadequate crop land for proper management of manure resources. This research project may provide the knowledge base for the integration of increased animal production into a regional agricultural system without sacrificing water quality. The findings will be immediately applicable to the Southeast. In view of significant needs for research in high priority national interest topics such as pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this grant.

The goal of this research project is to provide the knowledge base for the integration of increased animal production into a regional agricultural system without sacrificing water quality. The goal will be met by completing five specific objectives over a period of five years. The proposed research is on schedule. Since the project began on February 1, 1996, significant progress has been made on three of the five objectives. Work on the final two objectives will begin once fiscal year 1997 funds become available. Specific accomplishments include:

1. Completed installation and began sampling for chemical and biological water quality parameters at seven stream monitoring sites in the 390 square kilometer Piscola Creek Watershed, and continued sampling eight stream monitoring sites in the 340 square kilometer Little River Research Watershed.

2. Nearing completion of Geographical Information System databases for these two watersheds including information on soils, hydrography, topography, and landcover.

3. Began compiling a database listing all regulations, guidelines, and recommended management practices pertaining to animal agriculture and environmental quality in the southeast region.

The work supported by this grant began in fiscal year 1996 and the appropriation for fiscal years 1996 and 1997 was \$300,000. A total of \$600,000 has been appropriated. Information provided by the University indicates that \$202,000 in state funds will be provided to support this grant during fiscal years 1996 and 1997. Similar amounts of state support are anticipated for future years. In addition, funds will

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be expended by the other participating nonfederal institutions in support of this grant.

This research is being conducted by an interdisciplinary team of 19 scientists led by researchers at the University of Georgia's National Environmentally Sound Production Agriculture Laboratory in Tifton and Athens, Georgia. The experimental aspects of the project are being conducted in the coastal plain region of Georgia in watersheds that are representative of southern Georgia, southeast Alabama, and north central Florida. The anticipated completion date for the original objectives of the project was January 31, 1998. As discussed earlier, significant progress has been made on these objectives and they are on schedule. The anticipated completion date of additional or related objectives is January 31, 2001. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula or other funds.

As this project is still in its first year, a comprehensive external evaluation has not yet been conducted. However, the principal researcher is working with us to schedule an evaluation during 1997.

LIVESTOCK AND DAIRY POLICY, NEW YORK AND TEXAS

The purpose of this grant is to assess the possible economic impacts on the U.S. livestock, poultry, and dairy sectors from various macroeconomic, farm, environmental, and trade policies and new technologies. Both Cornell University and Texas A&M University conduct analyses of these policies and disseminate the information to policymakers, farmers, and agribusinessmen. Cornell focuses on dairy policies, and Texas A&M focuses on policies affecting livestock and poultry. Information on the implications of new and alternative farm, trade, and macroeconomic policies affecting the livestock and dairy sectors is of special interest to policy-making officials, farmers, and others. Such information enables farmers and agribusinessmen to make necessary adjustments to their operations to enhance profitability and for public officials to consider alternatives to sustain adequate supplies and minimize public program costs. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the States, Hatch Act or other formula funding could be used to support this research.

The original goal was to establish a specialized research program that could provide timely and comprehensive analyses of numerous policy and technological changes affecting livestock and dairy farmers and agribusinessmen and advise them and policymakers promptly of possible outcomes. This goal has been achieved. The program continues to provide assessments and evaluations of provisions and proposed changes in agricultural policies, the General Agreement on Tariffs and Trade, and the North American Free Trade Agreement; various income and excise tax measures; and alternative pricing measures for milk. The institutions are involved in several current studies relating to dairy provisions in the 1996 farm legislation. Both institutions maintain extensive outreach programs to disseminate results throughout the United States.

Grants have been awarded from funds appropriated as follows: fiscal year 1989, \$450,000; fiscal year 1990, \$518,000; fiscal years 1991–1993, \$525,000 per year; fiscal year 1994, \$494,000; and fiscal years 1995–1997, \$445,000 each year. A total of \$4,372,000 has been appropriated.

The non-federal funds and sources provided for this grant are as follows: \$37,420 State appropriations in fiscal year 1991; \$162,086 State appropriations and \$133,278 product sales for a total of \$295,364 in fiscal year 1992; and \$301,817 State appropriations, \$1,412 industry, and \$7,121 miscellaneous for a total of \$310,350 in fiscal year 1993; \$24,702 State appropriations, and \$5,961 industry for a total of \$30,663 in fiscal year 1994; \$235,526 State appropriations for fiscal year 1995; \$250,000 in State appropriations for fiscal year 1996; and approximately \$245,000 in State funding for fiscal year 1997.

The research is being conducted at Cornell University and Texas A&M University. The original objectives of this project have been achieved. In keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

We have conducted no formal evaluations of this project. Annual proposals for funding, however, are carefully reviewed and work progress is noted. Our agency contact is also in regular contact with principal researchers at each institution to discuss progress toward project objectives.

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LOWBUSH BLUEBERRY RESEARCH, MAINE

Interdisciplinary research is being conducted on many aspects of lowbush blueberry culture and processing includes investigation into factors affecting processing quality, biological control of insect pests, sustainable pollination, weed, disease and fertility management, cold hardiness and ground water protection. Maine produces 99 percent of all lowbush blueberries or 33 percent of all blueberries in the United States. This work is of major local interest, and helps maintain the continued availability and high quality of this native fruit commodity. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding sources could be used to support this research. In addition, future efforts will be made to collaborate with IPM regional and state representatives in finding solutions to the specified pest concerns.

The original research goal was to provide research answers to unique lowbush blueberry production, pest and processing problems. Research to date indicates that the field sanitizer was able to use heat to control insect pests without adversely affecting plant growth, providing a nonchemical alternative to pest management. Eumenid wasps were found to control red striped fireworm, providing a potential biological control. Native leafcutter bees and alfalfa leafcutter bees were found to increase lowbush blueberry fruit set and yield, providing an alternative to imported honeybees. Clonal variation was found to affect stem and flower bud hardiness that will prove to be important in clonal selection for planting. Control of monolina disease was found in using 4 ounces of propiconazole instead of 24 ounces of triforine thereby reducing the chemical needed for control of this disease. Boron and calcium were found to have more influence on the ability of the stigma to stimulate pollen germination than the germinability of the pollen grains themselves. A mechanical harvester was found to be effective and had yields and fruit quality comparable to hand harvest, providing growers with a more efficient tool to harvest blueberries. Economic weed thresholds have been determined for weed species, thereby giving growers a method to determine when to use control measures. Mowing proved as effective as wiping to suppress two of these species, providing a non-chemical control alternative. A rope wick wiper effectively controls weeds growing higher than blueberry plants without injuring the crop. Pesticide residues in lowbush blueberries were found to be well below federal tolerances. Carboxymethyl cellulose and various gums were found to control berry leakage, thereby improving quality for use in baked products. Products for use in food industry are being extracted from cull berries, thereby improving utilization and reducing waste.

Grants have been awarded from funds appropriated as follows: fiscal year 1990, \$170,000; fiscal year 1991, \$202,000; fiscal years 1992 and 1993, \$185,000 per year; fiscal year 1994, \$208,000; and fiscal years 1995, 1996, and 1997 at \$220,000 each year. A total of \$1,610,000 has been appropriated. Direct industry support from blueberry tax funds for 1996 is about \$65,000.

Research is being conducted at the University of Maine. The original objectives have not yet been met. The University of Maine researchers estimate that the project will be concluded at the end of fiscal year 2001. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula funds.

The agency evaluates this project on a yearly basis as funding is renewed. Project proposals are peer reviewed by the University of Maine review mechanism. Progress reports are submitted to the Cooperative State Research, Education, and Extension Service on a yearly basis as part of the review of the proposed project.

MAPLE RESEARCH, VERMONT

The research increased understanding of how water moves from the soil into and through the maple trees, affecting tree growth and sap production. It examined the relationship of maple decline to acid precipitation. It measured the effectiveness of various fertilizer combinations in improving the health of declining maple trees. It identified sources of lead contamination in maple products and began testing lead-free equipment and possible commercial methods for removing lead from maple syrup. Maple products are an important source of seasonal income in maple-growing areas of rural America. Identifying the source of contamination during processing and identifying commercial methods to remove lead from products is important to assuring consumers that these food products are not harmful. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding sources could be

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used to support this research. The goal of this research is to conduct research on maple tree physiology, management of sugar maple stands, and related aspects of the maple industry to benefit the maple industry in Vermont and the Northeast. The U.S. Department of Agriculture approved an amendment to these goals to permit the research to focus on lead in maple products.

Grants have been awarded from funds appropriated as follows: fiscal year 1985, \$100,000; fiscal years 1986–1987, \$95,000 per year; fiscal years 1988–1989, \$100,000 per year; fiscal years 1990–1993, \$99,000 per year; fiscal year 1994, \$93,000; and fiscal years 1995–1997, \$84,000 each year. A total of \$1,231,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$52,220 state appropriations and \$10,345 product sales in 1991; \$49,450 state appropriations and \$18,950 product sales in 1992; \$49,575 state appropriation and \$23,860 product sales in 1993; \$44,543 state appropriation, \$29,321 product sales, and \$25,000 local support in 1994; \$60,856 state appropriation, \$12,000 product sales, and \$19,090 local support in 1995; \$83,000 state appropriation and \$15,000 product sales in 1996; and \$67,000 state appropriation, \$11,000 local support, and \$15,000 product sales in 1997.

This research is being conducted at the Vermont Agricultural Experiment Station. The work relative to maple tree physiology and management of maple stands has been completed so far as this project is concerned, but it continues under sponsorship of the U.S. Forest Service. The new objective of identifying sources of heavy metals in maple products and reducing them is underway. Anticipated completion date is 1999. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

This project is evaluated annually by the U.S. Department of Agriculture through review of the project proposal and any previous accomplishments. Although satisfactory progress was being made on the tree physiology and maple tree management aspects of the project, the project was amended to focus on lead in maple products.

MICHIGAN BIOTECHNOLOGY CONSORTIUM

The objective of the Michigan Biotechnology Consortium's research program is to develop bioprocessing technology to manufacture products from agricultural raw materials, to increase the utilization of raw materials, reduce surpluses, and to degrade agricultural and associated wastes, thereby decreasing environmental costs of agricultural products and processes. Bioprocessing may include fermentation, an enzymatic step, chemical catalysis, or physical modification of agricultural raw materials. The principal researcher believes the results from the research to develop bioprocessing technology to manufacture value-added products from agricultural raw materials, which increases their utilization and reduces agricultural commodity surpluses and environmental costs, will contribute to regional and national priorities. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research.

The original goal of this research remains to select and develop market-viable technologies that will form the basis of new companies, new jobs, and additional tax revenues produced for state, local and Federal governments. The Michigan Biotechnology Institute and Michigan State University have succeeded in developing numerous technologies that are now in the marketplace.

Examples include the following: A process was developed to produce lactic acid through fermentation using corn as the feedstock resulting in a polymer for biodegradable plastics and a disinfectant. The properties of the polymer make it useful for non-woven applications such as medical packaging, clear blister bags, diapers, etc. Corn was used as a feedstock to develop plant growth formulations to enhance plant growth and productivity and reduce nitrogen fertilizer requirements. Growth promoters for high volume or high value crops have the potential for productivity increases of 15 percent and a reduction in nitrogen fertilizer use of 25 percent. Biodegradable plastic resins developed from cornstarch were made to produce compostable films for agricultural mulch and other soluble films, and for cellulase-base engineered thermoplastic resins. Biodegradable plastic resins from cornstarch were also developed for moldable products such as disposable cutlery, plastic containers, toys and toothbrushes. The market for resins for use in formulation and extrusion of plastics for all applications is in excess of \$2 billion annually. Corn was also used for the development of all-natural flavors and derivatives including a salty flavor compound that can be produced to taste in non-sodium and non-potassium forms. Low-cost, readily-available carbohydrates were used to produce high-quality,

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high-value optically-pure chiral intermediates for the pharmaceutical and agrochemical industries. A sand/manure separation system for dairy farmers was developed to cost-effectively separate manure from sand and recycle both components. Many of these products are being explored for commercial development through licensing agreements with industrial partners or new company startups. In addition, there are many agri-based industrial products under development including: several succinate-based green chemicals for surfactants and detergents, new food ingredients and flavors, paint removers, adhesives, lubricants, and plastic resins; green solvents from fermentation of corn-derived materials; ethanol produced from cellulose; natural food preservatives, improved enzymes for processing starch and fructose production, food flavors and pigments, feed ingredients to improve digestibility of forage-based animal feed; biomass-based animal feeds; and agricultural waste treatment processes to improve methods to clean up herbicides and pesticides.

Grants have been awarded from funds appropriated as follows: fiscal year 1989, \$1; fiscal year 1990, \$2,160,000; fiscal year 1991, \$2,246,000; fiscal years 1992–1993, \$2,358,000 per year; fiscal year 1994, \$2,217,000; fiscal year 1995, \$1,995,000; and fiscal years 1996 and 1997, \$750,000 per year. A total of \$16,584,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$1,750,000 in State of Michigan appropriations, \$160,000 from industry, and \$1,000,000 from miscellaneous in 1991; \$1,750,000 in State of Michigan appropriations, \$175,000 from industry, and \$1,000,000 from miscellaneous in 1992; \$1,750,000 in State of Michigan appropriations and \$100,000 from industry in 1993; \$1,750,000 in State of Michigan appropriations, \$175,000 from industry, and \$100,000 from miscellaneous in 1994; and \$200,000 in State of Michigan appropriations and \$2,035,000 from industry in 1995; \$1,250,000 in State of Michigan appropriations and \$350,000 from industry in 1996. A total of \$13,545,000 has been provided to support this work by non-federal sources.

The research is being conducted on the campus of Michigan State University and at the Michigan Biotechnology Institute. The Institute had reported specific milestones that it intended to be accomplished within the five-year period ending in fiscal year 1998. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula or other funds.

The Michigan Biotechnology Institute was evaluated for scientific merit by an agency peer review panel on January 7, 1997. The panel recommended approval of the project pending receipt of supplemental information on administrative aspects of the project. The Institute was also featured in a biotechnology special grant seminar hosted by the agency on December 16, 1996 at which the principal investigator presented research progress and highlights to an audience of agency scientists, administrators, and awards management staff.

MIDWEST ADVANCED FOOD MANUFACTURING ALLIANCE, NEBRASKA

The stated purpose of the Midwest Advanced Food Manufacturing Alliance is to expedite the development of new manufacturing and processing technologies for food and related products derived from United States produced crops and livestock. The Alliance involves research scientists in food science and technology, food engineering, nutrition, microbiology, computer science, and other relevant areas from 12 leading Midwestern universities and private sector researchers from numerous U.S. food processing companies. Close cooperation between corporate and university researchers assure that the latest scientific advances are applied to the most relevant problems and that solutions are efficiently transferred and used by the private sector. Fiscal year 1997 funds will support research from June 1, 1997 through May 31, 1998. The principal researcher believes the food manufacturing industry is the number one manufacturing industry in the Midwestern region and that opportunities for trade in high value processed food products will grow exponentially on a worldwide basis. The researcher believes the Alliance is positioned to fill the void in longer range research and development for the food industry. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research.

The goal, as stated previously, was to expedite the development of new manufacturing and processing technologies for food and related products derived from United States produced crops and livestock. This is accomplished by conducting research proposal competition among faculty from the 12 participating universities to find research projects where matching funds are available from industry. Fourteen (14)

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projects were funded from fiscal year 1994 funds with completion and final reports due by May 1, 1996. Ten (10) projects were funded from fiscal year 1995 funds with anticipated completion and final reports due by August 31, 1997. Ten (10) projects were also funded from fiscal year 1996 funds with anticipated completion and final reports due by May 31, 1998. Proposals are reviewed for scientific merit by independent scientists, and final selection of projects includes consideration of industrial interest and commitment of non-Federal matching funds.

The work supported by this grant began in fiscal year 1994. The appropriation for fiscal year 1994 was \$470,000, and for fiscal years 1995–1997, \$423,000 each year. A total of \$1,739,000 has been appropriated. Industry matching funds were \$823,148 in fiscal year 1994, \$414,164 in fiscal year 1995, and \$576,600 in fiscal year 1996.

The work is being coordinated by the Nebraska Agricultural Experiment Station at Lincoln. Specific research projects are also being conducted at seven (7) other universities that are part of the Alliance. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula funds.

An agency science specialist conducts a merit review of the proposal submitted in support of the appropriation on an annual basis. A review of the proposal was conducted on December 20, 1996. The principal investigator has provided descriptions of projects funded by this grant.

MIDWEST AGRIBUSINESS PRODUCTS, IOWA

The Midwest Agribusiness Trade Research and Information Center does applied research to improve the global competitiveness and marketability of agricultural products produced in the Midwest and disseminates the results to small and medium-sized agribusinesses. Projects include analyses of potential markets for U.S. agricultural products and equipment/technology in several countries; attitudes of foreign consumers; and development of new/improved U.S. products to meet foreign needs. The principal researcher believes that agribusiness firms in the United States, especially small to medium-sized firms, have a large unrealized potential to expand export sales and foreign business ventures. These untapped opportunities exist in well-established growth markets in the Pacific Rim and in newly opening markets such as Mexico, China, and Eastern Europe. The reluctance of small to medium-sized firms to explore these market opportunities is, in part, due to the high cost of market information and analysis and the perceived high risk of doing business in new markets with unfamiliar partners. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research.

The goal is to enhance the export of agricultural commodities, value-added products, and equipment produced by Midwestern agribusiness firms through research and education programs utilizing close-working relationships with those firms. In the past year, several studies were completed and distributed to interested firms, and new ones were initiated. Completed studies included: an analysis of conditions and prospects for agribusiness ventures in Egypt; market analyses for U.S. agricultural products in Cameroon, Senegal, and Cote d'Ivoire; an assessment of market opportunities for food processing equipment in China; Mexican consumer response to U.S. pork products; comparative advantage of U.S. pork in North American markets; impact of NAFTA on Midwest beef industry; an evaluation of the need for government regulation for maintaining or improving the quality of 12 export commodities; case studies of 16 outstanding food and agricultural exporters; evaluation of 60 varieties of corn for dry milling for the Mexican market; suitability of microsoy flakes for markets in Pacific Rim and African countries; and use of the Internet for marketing goods and services. In addition several seminars and conferences were held, "Global Connections" newsletter was published regularly, and business contacts database kept up to date. As a result of much work to establish trading relationships with China, the Des Moines sister-city of Shijiazhuang, China established a trade office in Des Moines.

The work supported by this grant began in fiscal year 1992. The appropriation for fiscal years 1992–1993 was \$700,000 per year; fiscal year 1994, \$658,000; and fiscal years 1995–1997, \$592,000 per year. A total of \$3,834,000 has been appropriated.

The non-federal funds and sources provided for this grant are as follows: \$185,495 State, appropriations and \$373,897 industry for a total of \$559,392 in fiscal year

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1992; \$183,192 State appropriations and \$318,966 industry for a total of \$502,158 in fiscal year 1993; \$127,948 State appropriations and \$500,394 industry for a total of \$628,342 in fiscal year 1994; \$258,053 State appropriations and \$389,834 industry for a total of \$647,887 for fiscal year 1995; \$165,425 State appropriations for fiscal year 1996; and \$162,883 State appropriations for fiscal year 1997. Industry contributions continue but were not reported for 1996 and 1997.

The program is carried out by Iowa State University. The original proposal in 1994 was for a period of 24 months, however, the objectives for expanding the export capacity of small to medium-sized agribusiness firms is an ongoing regional and national concern. The current phase of the program will be completed in 1999. In keeping with the Administration's policy of awarding research grants competitively, no further Federal funding is requested for this grant.

CSREES performed a merit review of the project in January 1997 as it evaluated the project proposal for 1997 and concluded that the Midwest Agribusiness Trade and Research Center at Iowa State University has a record of producing research and trade information for agribusinesses in the Midwest and other states. Research results appear in several professional journals and popular press.

MILK SAFETY, PENNSYLVANIA

The overall goal of the milk safety program is to provide insight into factors that help ensure an adequate and safe milk supply. Toward that end, the research has focused on factors that affect milk production, processing, manufacturing, and consumption. Special attention has been given to ways of preventing and/or treating pathogens that enter the milk supply.

The principal researcher believes that the question of microbial safety is of paramount interest to the milk/dairy industry at all levels. Dairy products such as milk, nonfat dry milk, cheese, butter, and cream have been associated with several large outbreaks of staphylococcal food poisoning, and coagulase negative *Staphylococcus* infections are one of the most common intramammary infections of dairy cattle. *Listeria monocytogenes* is present in about 4 percent of raw milk, and it has the potential to grow to dangerous levels during refrigeration and storage, making pasteurization critical in preventing foodborne illnesses from this organism. Bovine mastitis is the most important infectious disease affecting the quality and quantity of milk produced in the nation, costing producers an average \$180 per cow per year. The researchers believe ensuring safety of dairy products impacts not only consumer health and confidence in the safety of the food supply, but economic viability as well. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research.

The research is aimed at minimizing or eliminating future foodborne disease outbreaks from milk and dairy products. A key accomplishment includes the discovery of potential approaches of enhancing natural defense mechanisms of the bovine mammary gland through vaccination and immunoregulation. Discoveries of factors influencing growth of *Staphylococcus aureus* could be used to prevent or contain growth of this pathogen in foods. Researchers have identified and sequenced a gene from this bacterium that is essential for growth under stressful conditions. A computer model of *Listeria monocytogenes* growth in dairy foods under dynamic refrigeration conditions and during extended storage is under development to provide producers and processors with a proven technology for further enhancing the safety of fluid milk and related products. Researchers have elucidated conditions that significantly enhance the survival of *Listeria monocytogenes* during heat challenge. Research also revealed that consumers having high general concern about milk and dairy product safety and nutrition were more likely to be female, to have lower levels of education, be non-white and report more attention to scientific news, health and nutrition news and news about government food safety regulatory attention.

Grants have been awarded for milk consumption and milk safety from funds appropriated as follows: fiscal years 1986 through 1989, \$285,000 per year; fiscal year 1990, \$281,000; fiscal year 1991, \$283,000; fiscal year 1992, \$284,000; fiscal year 1993, \$184,000; fiscal years 1994–1997, \$268,000 per year. A total of \$3,244,000 has been appropriated for milk safety and milk consumption.

The University estimates that non-federal funds contributed to this project include the following costs and salaries: \$265,000 for fiscal year 1991; \$224,700 for fiscal year 1992; \$142,600 for fiscal year 1993; and \$252,168 for fiscal year 1995. No data are currently available for fiscal years 1994 and 1996.

The research is being conducted at the Pennsylvania State University. The researchers anticipate that research supported by this grant should be concluded in

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1999. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula or other funds.

An agency science specialist conducts a merit review of the proposal submitted in support of the appropriation on an annual basis. Since the agency has not yet received the proposal in support of the fiscal year 1997 proposal, the last review of the proposal was conducted on March 8, 1996. At that time, the agency science specialist believed that the projects addressed issues retained to safety of milk and dairy food products, were scientifically sound, and that satisfactory progress was being demonstrated using previously awarded grant funds.

MINOR USE ANIMAL DRUGS

The National Agricultural Program to Approve Animal Drugs for Minor Species and Uses (NRSP-7) was established to obtain Food and Drug Administration clearance of animal drugs intended for use in minor species and for minor uses in major species. The funds for the special research grant are divided between the four regional animal drug coordinators and the headquarters at Michigan State University for support of the drug clearance program. The NRSP-7 funds are being utilized by the regional animal drug coordinators and by allocation to State Agricultural Experiment Stations to develop data required for meeting clearance requirements. Participants in the research program consist of the regional coordinators, State Agricultural Experiment Stations, USDA's Agricultural Research Service (ARS), the U.S. Department of Interior, schools of veterinary medicine, and the drug industry. Each year priorities are established for the various species categories including small ruminants, game birds, fur-bearing animals, and aquaculture species. The fiscal year 1996 grants terminate between April 1997 and September 1998. The 1997 grant proposals have been received and are being reviewed.

Animal agriculture throughout the U.S. has relied on chemical and pharmaceutical companies to provide their industry with safe efficacious drugs to combat diseases. The need for approval from FDA's Center for Veterinary Medicine (CVM) for drugs to control diseases in minor species and for minor uses in major species has increased with intensified production units and consumer demand for residue-free meat and animal products. The high cost incurred to obtain data required by federal, regional, and local regulations to approve these drugs, when coupled with limited economic returns, has limited the availability of approved drugs for minor uses and minor species. The program provides research needed to develop and ultimately culminate in drug approval by FDA/CVM for the above purposes. The goals are accomplished through the use of regional animal drug coordinators as well as a national coordinator to prioritize the need, secure investigators at federal, state and private institutions, and oversee the research and data compilation necessary to meet federal regulations for approval. All drug approvals are national, although industry use may be regional. For example, aquaculture is concentrated in specific geographic sections of the country. The Administration believes this research to be of national, regional and local need.

The original NRSP-7 goal to obtain FDA clearance of animal drugs intended for use in minor species and for minor uses in major species remains as the dominant goal. In recent years, the research program has expanded or given additional emphasis to aquaculture species, veal calves and sheep. In addition, several new animal drug requests from the game bird industry were received during the past year. The importance of environmental assessment, residue withdrawals and occupational safety have increasingly been given more attention during the approval process to help assure consumer protection. To date, 282 drug requests have been submitted to the Minor Use Animal Drug Program for clearance. Working in conjunction with many universities, the U.S. Department of Interior, ARS, and numerous pharmaceutical companies, 24 research projects are now active and will be continued through 1997 to establish data for clearances. Twenty four public master files have been published in the Federal Register providing clearance for drug use in minor species. Two additional public Gmaster files are currently being completed and several others are under review by FDA. The Center for Veterinary Medicine is cooperating and supporting this program to the fullest extent. The program is a prime example of Federal interagency cooperation in coordination with academic institutions, pharmaceutical industries and conunodity interests to effectively meet an urgent need.

Grants have been awarded from appropriated funds in the amount of \$240,000 per year for fiscal years 1982-85; \$229,000 per year for fiscal years 1986-1989; \$226,000 for fiscal year 1990; \$450,000 for fiscal year 1991; \$464,000 per year for

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fiscal years 1992 and 1993; \$611,000 for fiscal year 1994; and \$550,000 for fiscal years 1995–1997. A total of \$5,741,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$156,099 state appropriations, \$29,409 industry, and \$11,365 miscellaneous in 1991; \$265,523 state appropriations, \$1,182 product sales, \$10,805 industry, and \$59 miscellaneous in 1992; \$212,004 state appropriations, \$315 industry; and \$103 miscellaneous in 1993; \$157,690 state appropriations, and \$7,103 miscellaneous in 1994; \$84,359 state appropriations in 1995; and \$191,835 non-federal support in 1996.

The grants have been awarded to the four regional animal drug coordinators located at Cornell University, the University of Florida, Michigan State University and the University of California-Davis, and to program Headquarters at Michigan State University. Research is conducted at these universities and through allocation of these funds for specific experiments at the State Agricultural Experiment Stations, ARS, the U.S. Department of Interior, and in conjunction with several pharmaceutical companies.

Selected categories of the Special Research Grants program address important national/regional research initiatives. The overall objectives established cooperatively with *FDAL* and industry are still valid. However, specific objectives continually are met and revised to reflect the changing priorities for FDA, industry, and consumers. Research projects for this program have involved 20 different animal and aquaculture species with emphasis given in recent years to research on drugs for the expanding aquaculture industry and increasing number of requests from the sheep, veal calf, and game bird industries. The minor use animal drugs program involves research on biological systems that by their nature are ever changing and representing new challenges to agriculture. Especially with the new sensitivities about safety and the environment, there is a high priority for continuation of these ongoing projects.

The agency conducted a formal review of the Minor Use Animal Drug Program in 1991. The program was found to be very productive and it was recommended that increased financial support should be sought in order to meet the national needs identified for the program. GAO also conducted a review of the program in 1991 and recommended additional support for the program. Each year the project is peer reviewed and twice a year the agency and representatives of the program meet with FDA to evaluate progress and to prioritize research. Biannually, a workshop is held to identify priorities for the program whereby producers, pharmaceutical companies, FDA, and researchers participate.

MOLLUSCAN SHELLFISH, OREGON

The research under this program was initiated in fiscal year 1995. A repository for the conservation of genetic material of molluscan shellfish was established during the first year of the project. This repository is serving as a source of genetic material for current breeding programs aimed at commercial production of shellfish with desirable traits. The researchers indicate that there is a national need for a molluscan broodstock development program to benefit the commercial industry through conservation, genetic manipulation and wise management of the genetic resources of molluscan shellfish. In view of the significant research needs in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this research. At the discretion of the state, Hatch Act funds or other funding sources could be used to support this research. The goals of this research program are to establish a repository for genetic materials of molluscan shellfish, to establish breeding programs for commercial production of molluscan shellfish, and to establish a resource center for the industry, researchers, and other interested parties in the United States and abroad.

The work supported by this grant began in fiscal year 1995 with an appropriation of \$250,000; fiscal year 1996 was \$300,000; and fiscal year 1997 is \$400,000. A total of \$950,000 has been appropriated. The university estimates a total of \$135,454 of non-federal funding in fiscal year 1995 primarily from state sources; in fiscal year 1996 no cost sharing was provided.

Research will be conducted at Oregon State University, Rutgers University, and the University of California at Davis. Although the specific research objectives outlined in the original proposal were to be completed in 1996, researchers anticipated that the original broad objectives would be completed in 1999. Progress has been made on major components of the research program. The anticipated completion date is for the broad research objectives is still 1999.

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The specific research outlined in the present proposal will be completed in fiscal year 1997. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

The agency evaluates the progress of this project on an annual basis. The university is required to submit an accomplishment report when the new proposal is submitted to CSREES for funding. The 1996 review indicated that the researchers were well qualified to conduct the research, the research is being conducted in close cooperation with the private sector.

MULTI-COMMODITY RESEARCH, OREGON

The purpose of this research program is to provide agricultural marketing research and analysis to support Pacific Northwest producers and agribusiness in penetrating new and expanding Pacific Rim markets for value-added products. The program examines the potential for increasing the competitiveness and economic value added of Pacific Northwest agriculture through improvements in food production, processing, and trade by assisting decision makers in developing economic and business strategies. The principal researcher believes that Oregon and the other Pacific Northwest States produce a wide variety of agricultural commodities and products with commercial potential for export to Pacific Rim countries. Research and analysis is necessary to guide agricultural producers and processors in assessing these markets and developing market strategies and value-added products, and marketing strategies tailored to specific Pacific Rim markets. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research. The principal researcher believes this research to be of national, regional and local need.

The goal of this proposed research project is to gain better scientific understanding of the Technical, economic and social relationships that define Oregon's value-added agricultural sector, and examine how these factors affect the economic performance of this sector. Project objectives were to:

1. develop a pilot agricultural economic growth assessment model for Oregon's farm and value-added agricultural products. While developed as an Oregon-specific model, it is anticipated that the resulting approach and methodologies will be applicable to other Pacific Northwest state economies.

2. conduct and coordinate applied research focused on understanding the factors affecting the global competitiveness of Oregon agriculture and the roles of public policies influencing the long-term success of the industry.

3. reassess and modify as necessary existing economic performance benchmarks designated for the Oregon agricultural industry, and create strategies and actionable targets for industry performance to be achieved within defined time periods.

4. encourage and facilitate applied, industry-level research into value-added agricultural trade, marketing and policy issues affecting Oregon and the Pacific Northwest.

5. assess, on an on-going basis, related agricultural trade and marketing research across multidisciplinary fields at Oregon State University and other universities throughout the region. This will include work with affiliated universities to establish research projects that further the development of agricultural products, processes, or international markets.

6. establish, in collaboration with the Asian wheat foods industry, criteria for development of noodle of varieties best suited to Asian markets. This will enhance the competitiveness of U.S. wheats in the Asian wheat foods markets through the accurate description of wheat quality characteristics and the exploitation of wheat blends, an inherent strength of the U.S. multi-class wheat delivery system.

The research began in fiscal year 1993 with an appropriation of \$300,000. The fiscal year 1994 appropriation was \$282,000, and fiscal years 1995 through 1997 appropriations are \$364,000 for each year. The total amount appropriated is \$1,674,000. The non-federal funding provided for this grant was \$168,824 State appropriations in fiscal year 1992; \$177,574 State appropriations in fiscal year 1993; and \$162,394 State appropriations in fiscal year 1994. Due to a change in university policy, the university has not reported the amount of non-federal funds appropriated for fiscal years 1995-1997.

The research program will be carried out at Oregon State University in Corvallis, and at the Agricultural Marketing and Trade Program in Portland, Oregon. This Special Grant is awarded on a year-by-year basis. Thus, Oregon State University has traditionally requested funds for this project on an annual basis and has budgeted the funds to individual sub-projects on that basis. Progress on original objec-

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tives is as follows: baseline data has been accumulated, an economic growth assessment model is being formulated and tested, global competitiveness is being assessed for value-added Pacific Northwest agricultural products, targets for performance are being worked out with agricultural industries, and many trade teams have been involved in assessing the ability of U.S. based industries to meet the demands for noodle production for Asian markets. Anticipated completion date is 1998. However, in keeping with the Administration's policy of awarding research grants competitively, no further Federal funding is requested for this grant. Research could be continued at the state's discretion using formula funds.

The agency reviews progress each year when a new proposal is submitted. We believe satisfactory progress is being achieved.

MULTI-CROPPING STRATEGIES FOR AQUACULTURE, HAWAII

In fiscal year 1993, the university redirected this research program to address the opportunities of alternative aquaculture production systems, including the ancient Hawaiian fish ponds on the island of Molokai. The university has developed a community based research identification process and has developed specific research projects to be included in this program. Current research includes work in the area of edible seaweed cultivation and the culture of the Pacific threadfin, a species indigenous to Hawaii. Previous research under this program led to the development of coproduction of shrimp and oysters in aquacultural systems. The technology developed from this program has been commercialized. The principal researchers indicate that the primary need for this research is to assist the native Hawaiians in improving the profitability and sustainability of the ancient Hawaiian fish ponds and other appropriate aquaculture systems as part of a total community development program. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research.

The original goal of this program was to develop technology for the coproduction of shrimp and oysters in aquacultural production systems. Research led to the development of oyster production systems that have been field tested under commercial conditions. The current research effort is aimed at developing sustainable commercial aquaculture production systems on the island of Molokai. Hatchery techniques have been developed for the culture of the Pacific threadfin. Techniques for the culture of two edible aquatic plants have been refined. Multidimensional field testing and evaluation of existing and restored ancient Hawaiian fish ponds is currently underway.

This research was initiated in fiscal year 1987 and \$152,000 per year was appropriated in fiscal years 1987 through 1989. The fiscal year 1990-1993 appropriations were \$150,000 per year; \$141,000 in fiscal year 1994; and \$127,000 in fiscal years 1995-1997, each year. A total of \$1,578,000 has been appropriated. The university reports a total of \$137,286 of non-federal funding for this program in fiscal years 1991-1994, \$318,468 in fiscal year 1995. The primary source of non-federal funding was from state sources.

Research is being conducted through the University of Hawaii on the island of Molokai. The completion date for the original project was 1993. The original objectives were met. The specific research outlined in the current proposal will be completed in fiscal year 1998. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula or other funds.

The agency evaluates the progress of this project on an annual basis. The university is required to provide an accomplishment report when the new grant proposal is submitted to CSREES for funding. In addition, in 1996 the CSREES program manager conducted a site visit to Molokai to meet with the principal investigator and industry cooperators. The 1996 review indicated that progress has been made in the implementation of the program despite the challenges of developing a community based program in such a unique social and cultural environment.

NATIONAL BIOLOGICAL IMPACT ASSESSMENT PROGRAM

The National Biological Impact Assessment Program was established to facilitate and assess the safe application of new technologies for the genetic modification of animals, plants and micro-organisms to benefit agriculture and the environment. This program was established in fiscal year 1989. During the last decade there has been an explosion of new information produced by rapid advances in biotechnology and its beneficial application to agriculture and the environment. The research proposed for this program fulfills an important national need to provide scientists easy

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access to relevant information that will facilitate the preparation of scientific proposals that comply with the oversight and regulatory requirements for testing potential biotechnology products and foster the safe application of biotechnology to benefit agriculture and the environment. This program supports the agricultural and environmental biotechnology community by providing useful information resources to scientists, administrators, regulators, teachers and the interested public.

The original goal of the National Biological Impact Assessment Program was to provide easy access to reliable information on public health and environmental safety of agricultural biotechnology research. Its objectives were to increase the availability, timeliness and utility of relevant information to the biotechnology research community; facilitate the compliance of biotechnology research with oversight and regulatory requirements for testing biotechnology products; and provide informational resources to the scientific community that would foster the safe application of biotechnology to agriculture and the environment. This same goal continues today. Each year much new information is added and integrated into the computerized database. The system has evolved to adapt new computer technologies and is now available via internet and the World Wide Web. This computer-based information system now includes texts of Federal biotechnology regulations, proposed rules and policy statements; databases of biotech companies, and research centers, institutional biosafety committees and state regulatory contacts; resource lists of publications, directories, bibliographies and meetings; monthly newsletters developed and distributed by this program; relevant Federal Register announcements; and links to other electronic information resources. In addition, this program provides biosafety training through workshops for academic and corporate scientists, biosafety officers and state regulators. A Field Test Notebook has been developed as a reference text for these workshops.

Grants have been awarded from funds appropriated as follows: fiscal year 1989, \$125,000; fiscal year 1990, \$123,000; fiscal years 1991–1993, \$300,000 per year; fiscal year 1994, \$282,000; and fiscal years 1995–1997, \$254,000 per year. A total of \$2,192,000 has been appropriated.

The co-principal investigator of this grant is Head of the Department of Biochemistry and Anaerobic Microbiology at Virginia Polytechnic Institute and State University. The university contributes its time to administer this grant which amounts to approximately \$5,000 each year.

This grant award is with Virginia Polytechnic Institute and State University. Former and current partners in the program include The Pennsylvania State University, Louisiana State University, North Carolina Biotechnology Center, University of Arizona, University of Missouri, Michigan State University, Purdue University, and the National Agricultural Library. There remains a continuing need to address the safety of field testing of genetically modified organisms to benefit agriculture and the environment. This continues to be a rapidly expanding field. Increasing amounts of new information needs to be properly integrated into the computerized information system each year. This program has been very successful in providing essential, updated information on the conduct of safe field experiments. Thus, the program remains a high priority and needs to be continued.

The National Biological Impact Assessment Program was extensively reviewed by an external panel of scientists in October 1994. The review report was highly complimentary regarding the Information Systems for Biotechnology funded by this special grant and recommended continuation of this program. The fiscal year 1997 proposal was peer reviewed and highly recommended for funding. Peer reviewers consistently conclude that the Information Systems for Biotechnology supported by this grant contains current, highly relevant, and useful information for the biotechnology research community. Scientists rely on this database as a source of current and accurate information in a rapidly changing field of science.

NEMATODE RESISTANCE GENETIC ENGINEERING NEW MEXICO

This research is designed to investigate naturally occurring compounds from diverse sources that may confer pesticidal resistance if introduced into agronomic plants. The main target pests are plant parasitic nematodes. The work is using molecular biological techniques to incorporate genes into agronomic plant which will shorten the time frame to produce transgenic plants. Progress includes the a Diphtheria A toxin has been engineered behind a root-knot promoter. The promoter triggers the toxin to kill the nurse cell, which is necessary for nematode development. Two proteinase inhibitor genes have been constructed and have been inserted into crop plants. The expression rate however is low at this time. Other genes that promote toxins have been constructed and inserted into experimental and crops plants. The bioassay with targeted pest appear very promising. The principal researcher be-

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lieves that the successful development of these techniques and subsequent transfer of nematode resistant genes into agronomic plants will provide an environmentally-sound system for all plants susceptible to plant parasitic nematodes. Because there are significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research. The original goal of this research was to provide an alternative approach for the control of plant parasitic nematodes through the use of molecular biological technologies to transfer pesticide resistant to plants. A nematode-stimulated promoter element was engineered for insertion in front of a bacteria toxin. A unique technique utilizing insect intestinal membrane vesicles were used as tools for detection of specific protein binding domains. The synthetic gene, CRY3A Bt has been successful in field trials on potato and eggplants.

The work supported by this grant began in fiscal year 1991 and the appropriations for fiscal years 1991–1993 was \$150,000 per year; \$141,000 was appropriated in 1994; \$127,000 in fiscal years 1995–1997, each year. A total of \$972,000 has been appropriated thus far.

The non-federal funds and sources provided for this grant were as follows: \$65,000 state appropriations in 1991; \$62,000 in state appropriations in 1992; \$75,000 in state appropriations in 1994; and \$75,000 in 1995. For 1996, the University and the Plant Genetic Engineering Laboratory are providing matching contributions in faculty and staff salaries, facilities, equipment maintenance and replacement, and administrative support. In 1997, there are no matching non-federal funds.

Research is being conducted at the New Mexico State University, and at collaborating universities in the region. The estimated completion date for this project is estimated to be in 2001. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

The last evaluation of this project was a merit review conducted December 19, 1996. In summary, the overall goal of this project is to use molecular biological techniques to develop pesticide capability in plants of agronomic importance. The research accomplishments demonstrated the feasibility of insertion of toxin genes into plants for expression against nematodes. The use of the synthetic CRY3A Bt gene has been successful in potato and eggplant in field trails.

NONFOOD AGRICULTURAL PRODUCTS PROGRAM, NEBRASKA

This work focuses on the identification of specific market niches that can be filled by products produced from agricultural materials, developing the needed technology to produce the product, and working with the private sector to transfer the technology into commercial practice. Major areas of application include starch-based polymers, use of tallow as diesel fuel, improvements in ethanol production, use of vegetable oil as drip oil for irrigation wells, production of levulinic acid, the extraction of wax from grain sorghum and production of microcrystalline cellulose from crop biomass. The principal researcher believes our ability to produce agricultural commodities exceeds our needs for food and feed. These commodities are environmentally-friendly feedstocks which can be used in the production of many biochemicals and biomaterials that have traditionally been produced from petroleum. The production of the commodities and the value-added processing of these commodities is regional in scope. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research.

The objectives of the Center are to identify niche markets for industrial utilization of agricultural products, improve and develop conversion processes as needed for specific product isolation and utilization, provide technical, marketing and business assistance to industries, and coordinate agricultural industrial materials research at the University of Nebraska, Lincoln. Accomplishments include developing a formula that combines starch from corn and wheat, plastic resin from polystyrene and polymethylmethacrylate and compatibilizing agents to make loose fill packaging materials. Collaborations with the private sector to optimize the technology and to initiate a startup company are ongoing. Crude degummed and dried soybean oil has been proven to be an effective drip oil for irrigation wells. Archer Petroleum in Omaha is developing a marketing plan for regional distribution through 2500 distributors. Crude beef tallow has been converted to methyl esters and studied as diesel fuel. Fuel tests and extensive engine studies have shown it to be compatible with petroleum diesel and diesel engines. Starch has been converted to levulinic acid using acid hydrolysis and an extruder. As an antifreeze, levulinic acid has a freezing point of -18°C , which is not as low as conventional antifreeze but is environ-

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mentally friendly. Other industrial uses of levulinic acid need to be explored. Protein films have been made and evaluated for potential use as coatings and in laminated packaging materials. These films may have a unique application for use as sprayed-in-place agricultural mulches. Seeds or plants could be easily planted by puncturing the film on the soil surface. Preliminary studies show significant potential for such film applications in controlling soil erosion.

The funding levels for this project are \$109,000 in 1990; \$110,000 per year in fiscal years 1991–1993; \$103,000 in fiscal year 1994; \$93,000 in fiscal year 1995; and \$64,000 in fiscal years 1996 and 1997. A total of \$763,000 has been appropriated.

The non-Federal funding for this project is: in fiscal year 1992, \$315,000, fiscal year 1993, \$330,000, fiscal year 1994, \$330,000, fiscal year 1995, \$309,000, and fiscal year 1996, \$251,000 and fiscal year 1997 \$250,000. These funds were from Nebraska Corn, Soybean, Wheat, Sorghum and Beef Boards, World Wildlife Fund, Nebraska Bankers Association, United Soybean Board and National Corn Growers Association.

This work is being conducted at the Industrial Agricultural Products Center, University of Nebraska, East Campus, Lincoln, Nebraska. The objectives of the original projects have been completed. Specific objectives have been identified in each renewal request. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula or other funds.

This project is evaluated annually based on an annual progress report. The lead staff scientist has reviewed the project and determined that the research is conducted in accord with the mission of this agency.

NORTH CENTRAL BIOTECHNICAL INITIATIVE

The North Central Biotechnical Initiative administered by Purdue University conducts a regional competitive research grants program for biotechnology research to enhance the economic value and commercial use of plant-based agricultural products of the North Central Region. The Initiative has funded biomolecular studies with commercial potential in corn, soybean, rice, barley, and alfalfa, as well as studies on significant plant pests such as corn borer, corn rootworm, and fungal pathogens. The principal researcher believes that the proposal links public and private research in plant biotechnology for enhanced commercialization of agricultural research that will contribute to regional and national priorities. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research. The principal researcher believes this research to be of national, regional or local need. The original goal of this project is to enhance the economic value and commercial use of plant-based agricultural products of the North Central Region. In 1996, the project awarded 13 grants for biomolecular studies with commercial potential in corn, soybean, rice, barley, alfalfa, and plant pests.

The work supported by this grant began in fiscal year 1995 and the appropriation for fiscal years 1995–1996 was \$2,000,000 per year and for fiscal year 1997, \$1,940,000, for a cumulative appropriation of \$5,940,000. At this time Purdue University has not allocated any direct non-federal funds for grants management. Purdue University staff are providing management and oversight support for the program. Non-federal support may accrue to individual research projects funded under the grant.

The funds are administered at Purdue University and the research is currently carried out at Purdue University, Iowa State University, Michigan State University, North Dakota State University, Ohio State University, University of Minnesota, University of Missouri, and University of Wisconsin. The researchers anticipate that work may be completed in fiscal year 1999. Completion of initially awarded grants will be in the summer of 1998 for two-year awards and later for programs extending beyond two years. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula or other funds.

The North Central Biotechnical Initiative was evaluated by an agency peer review panel on January 7, 1997. The panel expressed concerns about the project, primarily because of the brevity of the proposal and the absence of a proposal from the grant application. The agency requested additional information from the principal researcher, and the grant has been forwarded for final processing. The North Central Biotechnical Initiative was also featured in a biotechnology special grant seminar hosted by the agency on December 16, 1996, at which the principal investigator pre-

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mented progress and highlights to an audience of agency scientists, administrators, and awards management staff.

OIL RESOURCES FROM DESERT PLANTS, NEW MEXICO

The Plant Genetic Engineering Laboratory has been exploring the potential for the production of high value industrial oils from agricultural products. The effort has been focused on transferring the unique oil producing capability of jojoba into oilseed rape and soybean. With the development of technology to both isolate the enzyme components of oil biosynthesis and successfully transform the target plants, significant advances have been made with jojoba. In addition, oil enzymes have been studied in soybean, castor, oilseed rape, and meadowfoam. The principal researcher believes desert plant sources of valuable oils for industrial applications are typically low yielding and limited in climatic areas for farm production. Genetic engineering offers an opportunity to move genetic capability to high yielding major crops. Many of the oils and their derivative acids, waxes, and others can directly substitute for imports of similar polymer materials, especially petroleum. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research. The goal of the research is to transfer the unique oil producing capability of jojoba and other native shrubs into higher yielding crops such as oilseed rape and soybean. This is a form of metabolic engineering and it requires the transfer of coordinated groups of genes and enzymes into the host plant to catalyze the necessary biochemical reactions. Progress has included characterization and isolation of several lipid biosynthetic enzymes along with associated genes, binding proteins, and molecular enhancers.

This research began in fiscal year 1989 with a \$100,000 grant under the Supplemental and Alternative Crops program. Grants have been awarded under the Special Research Grants program as follows: fiscal year 1990, \$148,000; fiscal years 1991-1993, \$200,000 per year; fiscal year 1994, \$188,000; fiscal years 1995-1996, \$169,000 each year; and fiscal year 1997, \$175,000. A total of \$1,549,000 has been appropriated.

Non-federal funds are not provided for operational portions of this research. However, New Mexico State University and the Plant Genetic Engineering Laboratory provide \$90,000 for in-kind support per year including faculty salaries, graduate student stipends, facilities, equipment maintenance, and administrative support services.

The research is being conducted by the Plant Genetics Engineering Laboratory at New Mexico State University, Las Cruces, New Mexico. An estimate of the total time in Federal funds required to complete all phases of the project is 3-4 years. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula or other funds.

The Oil Resources from Desert Plants, New Mexico project was evaluated for scientific merit by an agency peer review panel on January 7, 1997. The panel recommended approval of the project pending receipt of supplemental information on administrative aspects of the project.

ORGANIC WASTE UTILIZATION, NEW MEXICO

Composted dairy waste is utilized as a pretreatment to land application. Composting dairy waste before land application may alleviate many of the potential problems associated with dairy waste use in agronomic production systems. Composting may also add value to the dairy waste as a potential landscape or potting media substrate. High temperatures maintained in the composting process may be sufficient for killing enteric pathogens and weed seeds in dairy waste. Noxious odors and water content may be reduced via composting. Composted dairy waste may be easier to apply, produce better seed beds, and not increase soil salinity as much as uncomposted dairy waste. The principal researcher believes the research will address the utilization of dairy waste combined with other high-carbon waste from agriculture and industry, including potash and paper waste, for composting. This approach to waste management will have high impact for states where dairy and agriculture are important industry sectors. This is especially true for New Mexico and the southwest United States, where the dairy business is growing rapidly. This research will also provide an additional pollution prevention tool for the industrial sectors dealing with potash and paper waste. In view of significant needs for research in high priority national interests such as pest management systems, funds

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are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research.

The original goal of the research is to determine the feasibility of simultaneously composting of dairy waste from agriculture and industry. The research will determine effects of utilizing composted waste, as opposed to raw waste, as a soil amendment on plant growth, irrigation requirements, and nutrient and heavy metal uptake. Phase 1, to determine the feasibility of simultaneous composting dairy waste with available high carbon wastes from agriculture and industry, has been completed. Phase 11, to determine the appropriate ratios of waste to carbon substrate for successful composting, is 50 percent completed.

The work supported by this grant begins in fiscal year 1996 and the appropriation for fiscal year 1996 was \$150,000, and for fiscal year 1997 is \$100,000. A total of \$350,000 has been appropriated. The non-federal funds for the duration of this grant from the state appropriation is \$50,000. There is another \$30,000 in-kind support from the industrial partners. Additionally, a sum of \$15,000 from the New Mexico State Highway Department is also being leveraged by this project.

This work will be carried out in New Mexico under direction of the Waste-Management Education & Research Consortium in collaboration with The Composting Council and industrial partners, such as Envio (Ohio), Plains Electric and McKinley Paper (New Mexico). Completion date will be January 1999. Objectives are being met as the project continues. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula or other funds.

This project has been evaluated based on the annual progress report and research findings presented at the annual Composting Council Conference. The lead staff scientist has reviewed the project and determined that this research is conducted in accordance with the mission of this agency.

PASTURE AND FORAGE RESEARCH, UTAH

CSREES has requested the university to submit a grant proposal in accordance with the Senate directive that has been received, and is being reviewed by the agency. The proposed research under this Special Research Grant will address issues related to forage production and utilization in Utah. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research. The original goal of this project is to develop a comprehensive guide for the management of irrigated pastures to assist livestock producers, reduce cost, and increase net returns.

The work supported by this grant begins in fiscal year 1997 and the appropriation for fiscal year 1997 is \$200,000.

Research will be conducted at the Utah Agricultural Experiment Station. The principal investigators anticipate the completion date for these objectives to be in 2002. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

The proposal for the initial year's funding is currently under agency review.

PEACH TREE SHORT LIFE IN SOUTH CAROLINA

Progress continued in 1996 with focus on the continued evaluation of longevity and productivity of Guardian rootstocks on peach tree short life sites in the southeast and replant sites throughout North American. More fundamental work has involved the biochemical characterization of the egg-kill factor produced by a bacteria on nematode eggs. Other basic studies involved the cloning of genes associated with production and expression of toxins from the bacteria. The problem of the disease on peach, nectarine, and plum trees in the southeastern United States effects is very great. More than 70 percent of peach acreage in the southeast is effected. Due to the loss of chemical nematicides, this disease has increased to nearly three times the levels experienced when nematicides were in use. In South Carolina, an average of 100,000 trees died in the years between 1980 and 1986. Continued studies on improvement of rootstock and the use the cultivar Guardian BY520-9 has potential to benefit the entire peach industry including California, New Jersey and Michigan where bacterial canker is a problem. Because there are significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research.

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The goal of this research was the continued evaluation of productivity of peach Guardian BY520-9 rootstocks on peach short life and investigations into novel management for ring nematodes by bacteria. Recent accomplishments include increased Guardian seed production that reached 600,000 commercial seeds. The rootstock is being tested in a 22 states and provinces and continues to perform well. Bulk seed lots of Guardian was shown to be resistant to root-knot nematodes. Fingerprinting using RAPD successfully separated root-knot nematode resistant rootstocks from susceptible ones. The unique insertion site in four Tn5 egg-kill factor minus mutants were identified. The bacteria, *Pseudomonas aureofaciens* BG33R was shown not to produce chitinase but other enzymes.

Grants have been awarded from funds appropriated as follows: fiscal year 1981, \$100,000; fiscal years 1982-1985, \$192,000 per year; fiscal years 1986-1988, \$183,000 per year; fiscal year 1989, \$192,000; fiscal year 1990, \$190,000; fiscal years 1991-1993, \$192,000 per year; fiscal year 1994, \$180,000, and fiscal years 1995-1997, \$162,000 each year. A total of \$3,041,000 has been appropriated.

The non-federal funds and sources for this grant were as follows: \$149,281 state appropriations in 1991; \$153,276 state appropriations in 1992; \$149,918 state appropriations in 1993; \$211,090 state appropriation in 1994; \$193,976 in state appropriation in 1995, \$169,806 in state appropriation in 1996.

This research is being conducted at South Carolina Agricultural Experiment Station. The researchers anticipated that the work may be completed in fiscal year 1998. Adequate progress has been made to assure that the objectives will be met before the completion date. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

The last agency evaluation was a merit review completed January 5, 1997. In summary, the evaluation of peach rootstocks with resistance to peach tree short life is of continued importance in managing this disease. The use of biological control strategies in suppression of plant parasitic nematodes are a complementary areas of research in that it can enhance disease management by protecting the peach rootstocks. Progress was made in all the objectives in 1996. Some accomplishments were the increased production and release of commercial Guardian seed and continued evaluation of the seed in 22 states and provinces. A molecular technique that separates resistant from susceptible peach rootstocks appeared successful in preliminary studies. Other accomplishments were on the identification of the Tn5 egg kill factor.

PEST CONTROL ALTERNATIVES, SOUTH CAROLINA

This grant supports research and technology transfer to provide growers with alternatives for managing pests and to implement the use of new alternatives reducing the sole reliance on chemical pesticides. The investigators contributing to the research and technology transfer at South Carolina believe that need for the development of alternatives for managing pests on vegetables is a regional and national problem. Research contributions are projected by South Carolina to impact vegetable production in the Southern region and consumers of vegetable production from the Southern region. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other formula funding could be used to support this research. In addition, future efforts will be made to collaborate with Integrated Pest Management (IPM) regional and state team representatives in finding solutions to the specified problem area.

The goal of this program is to investigate alternative methods of managing insects, plant diseases, and nematodes in vegetable crops as complements to or as substitutes for conventional chemical sprays. Principal accomplishments appear to rest in a four-year comparison of study plots of organically grown and conventionally grown vegetables. Residual nutrient levels in subplots treated with organic sources of fertilizer were greater than in subplots which received inorganic source of fertilizer. After four years of summer cropping followed by winter cover crop treatments, no herbicides nor pesticides have been applied to the study area. Weekly scouting has determined that harmful insect thresholds have not been reached. Naturally occurring beneficial insects were sufficient for pest control. The role of indigenous predators, parasites, and pathogens in controlling insect pests are being evaluated. Technology transfer to conventional and IPM systems has resulted in modified thresholds for caterpillar pests in collards and tomatoes which incorporate the impact of beneficials in the system and a sampling plan for tomato fruitworm which considers numbers of parasitized eggs used to schedule insecticide sprays. Numbers

of insecticide sprays were reduced by 75–100 percent and the weight of marketable fruits was the same in plots receiving weekly sprays.

This work supported by this grant began in fiscal year 1992 and the appropriation for fiscal years 1992 and 1993 was \$125,000 per year. In fiscal year 1994 the appropriation was \$118,000 and in fiscal years 1995 through 1997, \$106,000 per year. A total of \$686,000 has been appropriated. South Carolina has provided \$124,860 per year from State appropriations.

This research and technology transfer program is being conducted at the South Carolina Agricultural Experiment Station, Clemson University at Clemson, Florence, and Charleston, South Carolina. The original objectives of the project were for five years. Funding last year completed the five-year duration, and researchers indicated that the work would be completed by the end of the last fiscal year. Research on objective A, develop and evaluate microbial pest control agents for control of plant pathogens and insect pests of vegetables, is defuse and non-conclusive. Work in this area could be submitted to competitive peer review programs where the investigators would need to clearly focus specific activities and receive the benefit of the comments of peer scientists. Research on objective B, determine the efficacy of innovative cultural practices for vegetable production systems in South Carolina, and objective C, assess the role of indigenous predators, parasites, and pathogens in controlling insect pests, determine environmental and biological factors that influence the abundance and distribution of these indigenous beneficials, and consider the presence of natural enemies, as well as pests, in management decisions, is the area where the most progress appears evident. The base of information and orientation of the research in this area is adequate and of quality that the investigators could compete well in competitive grant programs such as sustainable agriculture or regional IPM grant programs, and would benefit from the peer review process. Progress in this area is an ongoing process as explanations are sought for the results being obtained. Research on objective D, evaluate and develop germplasm, breeding lines and cultivars for resistance to major pathogens of commercially important vegetables, and objective E, transfer new technology to user groups, has not demonstrated any progress that would not be anticipated from ongoing conventional sources of funds. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

We evaluate this project annually when we process the grant. Last year we wrote to the South Carolina station indicating that they should consider initiating a comprehensive review with CSREES participation. CSREES plans to initiate this review before we process the 1997 grant.

PESTICIDE CLEARANCE

Pest Management for Minor Crops

The Pest Management for Minor Crops (IR-4) Program, formerly the Pesticide Clearance Program, is a joint effort between the State Agricultural Experiment Stations, CSREES, and the Agricultural Research Service. IR-4 provides the national leadership, coordination and focal point for obtaining tolerance and safety data for pesticides and biological control agents for specialty crops such as horticultural crops. The agricultural chemical industries have not economically-justified the time and expense to conduct the necessary research for pesticides with small market potential. With the Federal registration resulting from this research, a large number of small acreage crops such as vegetables, fruits, nuts, spices and other specialized crops have been provided with needed crop protection against pests. Protocols are written after careful review and inputs from representatives of grower groups, industry and researchers. The researchers then carry out field trials on priority needs to determine their effectiveness, safety and usefulness and then analyze the field grown commodities, where appropriate, to identify and quantify any residues that may persist. All of this is done according to the Environmental Protection Agency's (EPA) Good Laboratory Practices guidelines which calls for rigorous field testing and chemistry analysis. The research program then assimilates the data from all the grower groups and chemical industry, and petitions are written for tolerances and Federal registration or reregistration. The 1996 grants terminate between March 1996 and March 1998. The basic mission of IR-4 is to aid producers of minor food crops and ornamentals in obtaining needed crop protection products. IR-4 is the principal public effort supporting the registration of pesticides and biological pest control agents for the \$31 billion minor crop industry. This is a national research effort which identifies needs by a network of users and state university and Federal researchers. This research is highly significant to national, regional or local needs.

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The goal is to obtain minor use and specialty use pesticide registrations and assist in the maintenance of current registrations, and to assist with the development and registration of biopesticides and safer pesticide products useful in IPM systems for minor crops. This research effort has been responsible for data in support of 2,074 food use clearances, which include 1,127 since 1984, 3,602 ornamental registrations, and research on 26 biopesticides resulting in 18 minor use registrations. The Pesticide Clearance program continues to have a high productivity which, according to EPA, results in 40 percent of all EPA pesticide registrations.

Grants have been awarded from appropriated funds as follows: Program redirection in fiscal year 1975, \$250,000; fiscal year 1979, \$500,000; fiscal years 1977–1980, \$1,000,000 per year; fiscal year 1981, \$1,250,000; fiscal years 1982–1985, \$1,400,000 per year; fiscal year; 1986–1989, \$1,369,000 per year; fiscal year 1990, \$1,975,000; fiscal year 1991, \$3,000,000; fiscal years 1992–1993, \$3,500,000 per year; fiscal year 1994, \$6,345,000; and fiscal year 1995 through 1997, \$5,711,000. A total of \$52,529,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$891,856 state appropriations and \$65,402 industry in 1991; \$1,002,834 state appropriations and \$104,292 industry in 1992; \$1,086,876 state appropriations and \$310,133 industry in 1993; \$550,160 state appropriations, \$408,600 industry, and \$924,169 miscellaneous in 1994; \$775,432 state appropriations, \$266,714 industry, and \$751,375 miscellaneous in 1995; and an estimated \$800,000 state appropriations, \$250,000 industry, and \$800,000 miscellaneous in 1996.

Field work is performed at the State and Territorial Experiment Stations. Laboratory analysis is conducted primarily at the California, New York, Florida and Michigan Agricultural Experiment Stations with assistance by the Oregon, Hawaii, North Dakota, Arkansas, North Carolina, Washington, Virginia, Mississippi, Idaho, Pennsylvania and New Jersey Agricultural Experiment Stations. Protocol development, data assimilation, writing petitions, and registration processing are coordinated through the New Jersey Agricultural Experiment Station. ARS is conducting minor use pesticide studies at locations in California, Georgia, Illinois, Maryland, Ohio, Oregon, South Carolina, Texas, and Washington. ARS laboratories in Georgia, Maryland and Washington are cooperating with analyses.

Selected categories of the Special Research Grants program address important national and regional research initiatives. The pesticide clearance program, also referred to as pest management for minor crops, involves research on biological systems that by their nature are ever changing and presenting new challenges to agriculture. The IR-4 workload is anticipated to be long term because of the sensitivities about food safety and the environment, plus the reregistration of older pesticides mandated by the 1988 amendments to the Federal Insecticide, Fungicide, and Rodenticide Act—FIFRA. IR-4 developed a strategy in 1989 to defend needed minor use pesticides that were subject to reregistration but would not be supported by industry for economic reasons. In addition, the Food Quality Protection Act calls for more extensive residue data requirements which would take into account an additional safety factor for assessing pesticides on foods consumed by infants and children. IR-4 will fulfill these commitments by December 1997, the conclusion of reregistration process mandated by the FIFRA amendments. IR-4's updated strategic plan focuses on the registration of biopesticides and safer pest control technology for minor crops. This program thrust will be carried out along with the traditional minor crop pesticide clearance programs

Each year the program is peer reviewed and reviewed by CSREES' senior scientific staff. A summary of those reviews indicate excellent progress in achieving the objectives. In addition to the yearly evaluations, the program received an on-site external review sponsored by CSREES in December 1990, and a GAO review, the results of which were published in June 1992. The GAO report notes that IR-4 has an effective research agenda to include pesticides that are most likely to be approved by EPA, using the existing land-grant university infrastructure. The mentioned legislative requirements and regulatory standards add to IR-4's already significant workload.

PESTICIDE IMPACT ASSESSMENT PROGRAM

Research funded by the National Agricultural Pesticide Impact Assessment Program NAPIAP—discovers, gathers, publishes, and distributes information relating to the use and effectiveness of pest management alternatives essential to the maintenance of U.S. agricultural crops and livestock production. These data involve evaluating the biologic and economic impact and consequences of restricting the use of key pesticides either through voluntary cancellations or regulatory action. NAPIAP data augments National Agricultural Statistic Service—NASS—data by conducting

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commodity based assessments on minor-use or small acreage crops. To insure that there is no duplication of effort, NAPIAP coordinates information collection with NASS and concentrates its pest management inquiries on commodities not surveyed by NASS. This program provides the Environmental Protection Agency (EPA) and the USDA with information on the use and effectiveness of pest management alternatives essential to the maintenance of U.S. agricultural crops and livestock production. EPA uses this information in making environmentally sound regulatory decisions which have minimal risk to human health and the economic balance of U.S. agriculture. USDA uses these data to identify commodity sites where there are critical pest threats to production because no or few pest management alternatives exist. This national research and information delivery effort involves USDA coordinated cooperative interactions with scientists in all State Agricultural Experiment Stations and Cooperative Extension Services. The USDA and EPA receive state generated agricultural information needed for sound regulatory decision-making and the state partner receives federal funds, participatory input into the regulatory process, and direct access to timely regulatory information.

The National Agricultural Pesticide Impact Assessment Program—NAPIAP—has been an on-going research effort whose original goal in 1977 was to gather data to provide comprehensive assessments documenting what would be the impact on agriculture if certain pesticides would no longer be available. A federally coordinated network of state scientist contacts was developed in the intervening years as broader and more environmentally enlightened goals evolved within this program. Today the NAPIAP's goals are defined in its strategic plan as: first, in collaboration with USDA, EPA, and Land-Grant partners, to focus activities on collecting and delivering high quality, science based pest management information for use in the regulatory process; and second, maintain and enhance a strong partnership between the USDA and the Land Grant System in order to continue the positive interactive flow of vital pest management information between the USDA, the regulatory community, and production agriculture.

Grants have been awarded from funds appropriated as follows: Fiscal years 1977–1981, \$1,810,000 per year; fiscal years 1982–1985, \$2,069,000 per year; fiscal years 1986–1988, \$1,968,000 per year; fiscal year 1989, \$2,218,000; fiscal year 1990, \$2,437,000; fiscal years 1991–1993, \$2,968,000 per year; fiscal year 1994, \$1,474,000; and fiscal years 1995–1997, \$1,327,000 per year. A total of \$42,244,000 has been appropriated.

The majority of the cost of the state scientist and the NAPIAP program is born by the state partner. The exact contribution of each state is not known, nor has this information been requested to be reported to the federal partner during the duration of this program. The federal program funds provided to the states by the Cooperative State Research, Education, and Extension Service have been used by state partners to partially defray their costs of staffing a Pesticide Impact Assessment Program State Liaison Representative on their Land Grant campus. The remainder of the salary costs, facility costs, clerical support expenditures, supplies and program costs of the program's State Liaison Representative have been born by each state and these costs are considered the state funding provided to support this program. State estimates of their contributions to this program have ranged from 3 to 6 times the federal dollars that have been provided to support their cooperative efforts.

This work is underway at State Agricultural Experiment Stations in 53 states and Territories. Competitively awarded research funds which fill both national and regional informational needs are coordinated through a lead state in each of the four regions of the United States: California—West; Ohio—North Central; Northeast—Pennsylvania; and Florida—South. The National Agricultural Pesticide Impact Assessment Program—NAPIAP—has been an ongoing research effort whose original goal in 1977 was to gather data to provide comprehensive assessments documenting what would be the impact on agriculture if certain pesticides would no longer be available. A federally coordinated network of state scientist contacts was developed in the intervening years as the information needs of the regulatory agency increased. This is a multi-agency on-going program strongly supported by dollars and personnel within CSREES, ARS, ERS, and the Forest Service which is attempting to address the ever increasing data needs for information by EPA in recent years. As the impacts of the Food Quality Protection Act become more widely realized and IPM implementation requires measurements to comply with the Government Performance and Results Act, there will be an even greater need for pest management information traditionally gathered, developed, and processed by the NAPIAP.

A comprehensive evaluation and review of the national component of the National Agricultural Pesticide Impact Assessment Program—NAPIAP—was conducted in February 1995. The review panel's report was published in June 1995. The review team was composed of 10 scientists from EPA, Industry, and the Land Grant Sys-

tem. The recurring theme that emerged from the 1995 review was a directive to focus the NAPIAP program on data collection on the benefits of pest management alternatives. To address this directive, CSREES brought together the programmatic and budgetary components of CSRS and CES into a single coordinated NAPIAP effort. This reorganized program is now supported by parallel funding of Public Law 89-106 and Smith-Lever 3(d) dollars. In addition to NAPIAP program allocation funds, there is a regionally-based competitive grants program designed to: first, quantify the usage of different pest management alternatives; second, quantify yield and quality data related to pest management alternatives; and third, measure other benefit parameters related to agricultural pest management. The data gathered by NAPIAP will also be used to aid the Pest Management Alternative program efforts. There is strong potential for further collaboration between these two programs.

PHYTOPHTHORA ROOT ROT, NEW MEXICO

Work has continued to focus in general on development of strategies for sustainable vegetable production in irrigated lands. Work has continued on the search for Phytophthora root rot resistance in chilies, identification of molecular markers for rot tolerance genes, investigation on irrigation modification as a means to manage root rot, and soil bed temperature control as a means to control disease. Because the Phytophthora disease threatens chili production in west Texas, New Mexico, and Eastern Arizona, this problem is of state-and regional-scale significance. In view of significant needs for research in high priority national interest topics such as the integrated pest management systems initiative, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research. The original goal was to improve chili production through genetically superior cultivars, combined with new improved cultural practices. Researchers have developed a highly effective disease screen that selects resistant seedlings, found that genes for resistance to root rot do not provide protection against Phytophthora foliar blight, that a wild species of Capsicum is immune to the fungus, and that molecular markers are useful to introgress genes for tolerance. They also found that alternate row irrigation and drip irrigation significantly reduce Phytophthora root rot. Control of soil temperature with soil mulches can greatly impede the progression of root rot in the irrigated fields.

The work supported by this grant began in fiscal year 1991 with an appropriation of \$125,000 for fiscal year 1991. The fiscal years 1992-1993 appropriation was \$150,000 per year; \$141,000 in fiscal year 1994; and \$127,000 in fiscal years 1995-1997, each year. A total of \$947,000 has been appropriated. The non-federal funds supporting this project amount to \$255,319, from state appropriations and the California Pepper Commission.

Research is being conducted at New Mexico State University. The anticipated completion date for the original objectives was 1995. Those objectives have not been met. Related programs deal with research and development efforts designed to prevent or manage diseases impacting vegetable production in irrigated areas, and co-operators estimate that the objective of these programs should be met by 2002. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

The last agency evaluation was made in December, 1996. In summary, the evaluation stated that the overall goal of this project is control of various soil-borne diseases of irrigated vegetable crops in New Mexico, with applicability to other southwest U.S. production areas. Specifically, the current effort focuses on Phytophthora root rot of chilies.

POSTHARVEST RICE STRAW, CALIFORNIA

The postharvest rice straw special grant is new in 1997 and has two main objectives: (1) characterize current capabilities, costs and constraints in harvesting and handling rice straw as a renewable material for commercial products and (2) investigate alternative harvest and handling systems and evaluate their specialized equipment and system designs. California legislation mandates reduction in the amount of open rice straw burning, the principal method of rice straw disposal. Efficient harvest and handling may make rice straw a suitable raw material for user businesses while meeting straw burning regulations and improving air quality. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research. The principal researcher believes this research to be of regional and local need. This research was initiated in 1997. The goal is to

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demonstrate efficient and economic rice straw harvest and handling, thereby establishing rice straw as a feedstock for value-added manufacturing and other uses.

The work supported by this grant begins in fiscal year 1997 and the appropriation for fiscal year 1997 is \$100,000. The University of California-Davis cites cooperation by the California Rice Industry Association and the California Rice Research Board. Cost-sharing support from non-federal funds is not included. Cost-sharing may become available from industry later in the project as prototype harvest and handling equipment and systems for rice straw are developed and tested.

Research will be conducted at the Department of Biological and Agricultural Engineering, University of California-Davis, California. It is anticipated by the University of California-Davis that the postharvest rice straw project will be completed in 2002, after a five year-period to meet objectives. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

Since 1997 is the first year for the postharvest rice straw project, no evaluation has been conducted.

POTATO CULTIVARS, ALASKA

This research will focus on the development of potato cultivars that might be useful as disease resistant seed stock for the contiguous U.S. This research will focus on the development of potato cultivars that might be useful as disease resistant seed stock for the contiguous U.S. However, in view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research. This research will focus on the development of potato cultivars that might be useful as disease resistant seed stock for the contiguous U.S. Funding for this project was initiated in fiscal year 1997, so no accomplishments have been made under the grant to date.

The work supported by this grant begins in fiscal year 1997. Funding is appropriated in fiscal year 1997 for \$120,000. No information on non-federal funds have been reported to CSREES yet.

The research will be conducted in the state of Alaska. It is anticipated that the completion date for the original objectives will be within a 5-year period. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

Because this is a new project in fiscal year 1997, the agency has not had an opportunity to evaluate the project, but will follow its procedures of reviewing the University's proposal and the resulting progress reports.

POTATO RESEARCH

Scientists at several of the State Agricultural Experiment Stations in the Northeast, Northwest, and North Central States, are breeding new potato varieties, high yielding, disease and insect resistant potato cultivars, adapted to the growing conditions in their particular areas, both for the fresh market and processing. Research is being conducted in such areas as protoplast regeneration, somoclonal variation, storage, propagation, germplasm preservation, and cultural practices. The principal researcher believes this research effort addresses needs of the potato producers and processor. Research areas being studied include storage and postharvest handling of potatoes and their effect on potato quality. Potato producer and processor needs are breeding and genetics, culture factors and pest control on potato production. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research. Efforts will be made to collaborate with IPM regional and state team representatives in finding solutions to specific pest concerns. The original goal was to improve potato production through genetics and cultural practices as well as improve storage for quality potatoes for processing and fresh market. This research has resulted in a number of new high yielding, good quality, disease and insect resistant, russet type cultivars, which are now being used in the processing industry and in the fresh market. Research by the Pacific Northwest States of Washington, Oregon and Idaho has resulted in the release of a number of cultivars, including Gemchip, Calwhite, Century Russet, Ranger Russet, Frontier Russet and Chipeta. In addition, North Dakota developed Norkatah as a result of this program.

Grants have been awarded from funds appropriated as follows: fiscal year 1983, \$200,000; fiscal year 1984, \$400,000; fiscal year 1985, \$600,000; fiscal years 1986-

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1987, \$761,000 per year; fiscal year 1988, \$997,000; fiscal year 1989, \$1,177,000; fiscal year 1990, \$1,310,000; fiscal year 1991, \$1,371,000; fiscal years 1992 and 1993, \$1,435,000 per year; fiscal year 1994, \$1,349,000; and fiscal years 1995 through 1997, \$1,214,000. A total of \$15,438,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$401,424 state appropriations, \$4,897 product sales, \$249,830 industry, and \$30,092 miscellaneous in 1991; \$567,626 state appropriations, \$6,182 product sales, \$334,478 industry, and \$44,323 miscellaneous in 1992; \$556,291 state appropriations, \$9,341 product sales, \$409,541 industry and \$44,859 miscellaneous in 1993; \$696,079 state appropriations, \$21,467 product sales, \$321,214 industry, and \$226,363 miscellaneous in 1994; \$935,702 state appropriations, \$35,376 product sales, \$494,891 industry, and \$230,080 miscellaneous in 1995; and an estimated \$900,000 state appropriations, \$10,000 product sales, \$400,000 industry, and \$200,000 miscellaneous in 1996.

The research work is being carried out at the Cornell, Idaho, Maine, Maryland, Michigan, North Dakota, Oregon, Pennsylvania, and Washington State Agricultural Experiment Stations. The project was initiated to accomplish significant results in about five years. Because the research is based on genetic varietal development, progress in developing new potato varieties takes from 5 to 10 years. Keeping with Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula funds.

Each year the grant is peer reviewed and reviewed by CSREES's senior scientific staff. A summary of that review indicated progress in achieving the objectives. In addition, the agency has at least one formal meeting with representatives from the potato industry to review research needs.

PREHARVEST FOOD SAFETY, KANSAS

The project is to examine the incidence of shedding of *E. coli* 0157:H7 in feces of beef cattle and the impact of various management procedures such as calving, weaning, routine cattle handling for vaccination, etc. on the frequency and amount of shedding of these bacteria. The study will focus on the differences between small and large cow-calf operations in Kansas. The presence of *E. coli* in cattle destined for slaughter and entry of meat products into the human food chain has given impetus to the need for understanding the ecology of the organism and the impact of management strategies, including herd size, on the prevalence of the organism and likelihood of contamination of meat supplies. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research.

The original goal of this research was to determine the relative incidence of shedding of *E. coli* 0157:H7 from beef cattle in small and large cow-calf operations and the impact of various management events in the production cycle on this bacterial shedding. The principal researcher expects this information will assist in reducing the prevalence of this organism in beef cattle and, thus, reduce the incidence of food-borne illness in humans due to this bacterium. To date, the research team has established new highly effective and rapid detection systems for identifying the *E. coli* organism in feces of cattle. The cooperating herds have been identified and initial collections have been made. Collaborative arrangements have also been established with scientists at the University of Nebraska-Lincoln for doing more intensive work with animals that are identified as "shedders". At this time they have met all of their goals on time and expect to continue to do so.

The work supported by this grant began in fiscal year 1996. The appropriation for fiscal years 1996 and 1997 was \$212,000. A total of \$424,000 has been appropriated. During fiscal year 1996 non-federal funds provided to this project were \$150,000 in state appropriations and \$91,450 in contributed indirect costs. It is anticipated that a similar contribution will be made by Kansas State University in fiscal year 1997.

This research is being conducted at Kansas State University, University of Nebraska-Lincoln and at ranches in Kansas, Nebraska and Colorado. The anticipated completion date was October 1, 1998, for the original objectives. At this time, the research team has completed all objectives that were planned for Year 1 of the grant and are working on the objectives for Year 2. It is anticipated that the other original objectives will be completed on schedule and the project should terminate in late 1998. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

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The agency evaluates the progress of this project on an annual basis. The principal researcher has provided regular progress reports which have confirmed that the objectives are being accomplished in a timely manner.

PRESERVATION AND PROCESSING RESEARCH, OKLAHOMA

Research has focused on the effects of preharvest and postharvest factors on the market quality of fresh and minimally processed horticultural products, including factors affecting marigold petal pigment content, minimal processing procedures for extending the shelf life and reducing the oil content of pecans, and harvest quality evaluations for watermelons, pecans and peaches. Researchers are developing harvester prototypes for multiple harvest of marigold flowers and drying and threshing systems for marigold petal drying and separation. Work is ongoing to develop a fruit orienting mechanism to be incorporated into an on-line grading system and to develop integrated harvesting/postharvest handling systems for fresh market and processing market horticultural products. Research is also ongoing to develop methods to determine textural properties of pecans, determine optimum operating parameters for supercritical carbon dioxide and other alternative partial oil extraction, and develop and optimize modified atmosphere packaging techniques for pecan shelf life extension. Fiscal year 1997 funds will support research from July 1, 1997 through June 30, 1999. The principal researcher believes that technological improvements in fruit, nut and vegetable handling systems are critically needed to supply domestic markets and to support continued participation in international commerce and thus serves the national need. Regionally, processing systems under development for commercial adaptation provide crucial solutions required for market expansion of pecans, affecting product market potential and value throughout the southern U.S. Locally, improvements in postharvest handling and processing are necessary to support growth of the industry and ensure competitive involvement in national and international commerce of horticultural commodities uniquely suited for production in Oklahoma. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other formula funding could be used to support this research.

The goal of the research has been to define the major limitations for maintaining quality of harvested fruits, vegetables and tree nuts and prescribe appropriate harvesting, handling and processing protocols to extend shelf life and marketability of harvested horticultural commodities, thus maintaining profitability of production systems and assuring an economic market niche for Oklahoma producers and food processors. A systems approach to develop complementary cropping, harvesting, handling and processing operations has resulted in development of improved handling systems for cucurbit and tree fruit crops. Matching funding has supported development of nondestructive processing systems for partial oil reduction of tree nuts, to extend shelf life and lower the calorie content for the raw or processed product, resulting in development of a business plan for a commercial facility. Technologies and procedures previously developed for cucurbit and tree fruit systems are now being applied to support development of profitable okra, pepper, sage, basil, tree nut, sweetcorn, and marigold cropping, handling and light processing systems, with a targeted completion date of 1999. Research from this project provided the basis for commercial high relative humidity storage of peaches. Grants have been awarded from funds appropriated as follows: fiscal year 1985, \$100,000; fiscal year 1986, \$142,000; fiscal year 1987, \$242,000; fiscal years 1988 and 1989, \$267,000 per year; fiscal year 1990, \$264,000; fiscal year 1991, \$265,000; fiscal year 1992, \$282,000; fiscal year 1993, \$267,000; fiscal year 1994, \$251,000; and fiscal years 1995-1997, \$226,000 each year. A total of \$3,025,000 has been appropriated.

Support from the State of Oklahoma, through the Oklahoma Agricultural Experiment Station and through the Oklahoma Centers for Advancement of Science and Technology, have been provided as follows: fiscal year 1991, \$126,900; fiscal year 1992, \$209,783; fiscal year 1993, \$219,243; fiscal year 1994, \$308,421; fiscal year 1995, \$229,489; and fiscal year 1996, \$366,570, for a total of \$1,460,405 in state funds. An additional \$16,100,000 has been committed by the State of Oklahoma for development of an Agricultural Products and Food Processing Center to support, among other programs, the horticulture processing initiatives, and to begin operation in the spring of 1997. The Oklahoma State University Division of Agriculture Sciences and Natural Resources has appropriated approximately \$2 million dollars to staff the facility.

This work is being conducted at the Oklahoma State Agricultural Experiment Station, in conjunction with ongoing production research at the Wes Watkins Agricultural Research and Extension Center and the South Central Agricultural Research

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Laboratories. The principal investigator anticipated that the fiscal year 1996 grant would support work through June 1998. It is expected that ongoing research will be completed in 2001. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula or other funds.

An agency science specialist conducts a merit review of the proposal submitted in support of the appropriation on an annual basis. A review of the proposal was conducted on December 20, 1996. Though research progress was satisfactory, development and commercial adoption of new practices and equipment has been less certain. The project was evaluated as part of a comprehensive CSREES program site review in the fall of 1995, with a recommendation by the review team to continue the value-added product development.

RED RIVER CORRIDOR, MINNESOTA AND NORTH DAKOTA

The purpose is to conduct a program of research to assess emerging international trade opportunities for the Red River trade region and develop the means to be able to compete for such opportunities in order to stimulate economic development. Projects were initiated to assess the Corridor's transportation infrastructure, research and development capability, competitive position, export opportunities in Europe and Latin America, and trade strategies. Emphasis is placed on technology and information transfer to inform users and potential users. The University of Minnesota has submitted a grant proposal for fiscal year 1997 to CSREES, and the grant has been awarded. The researchers believe there is a regional need to find new and alternative markets to replace traditional markets that have little or no growth potential and to develop the capabilities to compete successfully for these markets. International trade is expected to support continued economic growth in this primarily rural, agriculturally dependent region. In view of significant needs for research in high priority national interest topics, such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research.

The goal is to identify and assess export market opportunities and develop strategies and programs to improve the region's competitiveness in international trade. The program has completed studies on transportation services and costs, the region's trade position on specialty crops and metal fabrication, agro-industrial research and development capabilities, and export opportunities through collaboration with Canada. Studies in progress include trade strategies of selected European regions and their implications for regional trade strategies, trade opportunities with Mexico, bilateral technology transfer among businesses in the region, assessment and implications of Latin American transportation systems on trade, opportunities and linkages between rural Mexico and the Red River region, and relationships between social structure and rural development. This grant will be used to fund projects to expand the use by rural businesses of state-of-the-art telecommunications technologies to expand markets and up-grade worker skills.

The work supported by this grant began in fiscal year 1992. The appropriation for fiscal years 1992-1993 was \$200,000 per year, \$188,000 in fiscal year 1994, and \$169,000 in fiscal years 1995-1997. A total of \$1,095,000 has been appropriated.

The non-federal funds and sources provided for this grant are as follows: \$4,300 State appropriations and \$2,269 miscellaneous for a total of \$6,569 in fiscal year 1992; \$16,000 State appropriations, \$4,138 industry, and \$16,688 miscellaneous for a total of \$36,826 in fiscal year 1993; and \$1,600 State appropriations, \$1,637 industry, and \$29,501 miscellaneous for a total \$32,738 in fiscal year 1994. The preliminary allocation of non-federal matching funding for fiscal year 1995 is \$2,000 State appropriations, \$7,500 industry, and \$6,500 miscellaneous for a total of \$16,000. Therefore, a total of \$91,133 non-federal funds has been provided through fiscal year 1995. Data for fiscal year 1996 are not available at this time.

The research program is carried out by the University of Minnesota, Crookston, in collaboration with North Dakota State University. The researchers indicate that this phase of the program may be completed in fiscal year 1998. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding is requested for this grant.

A merit review was conducted of this project in 1996 which indicated that it has contributed to the strengthening of communications to rural America regarding international trade opportunities. A site visit is scheduled for 1997 to assess the project.

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REGIONAL BARLEY GENE MAPPING PROJECT

The objectives of this project are to: construct a publicly available medium resolution barley genome map; use the map to identify and locate loci, especially quantitative trait loci controlling economically important traits such as yield, maturity, adaptation, resistance to biotic and abiotic stresses, malting quality, and feed value; provide the framework for efficient molecular marker-assisted selection strategies in barley varietal development; identify chromosome regions for further, higher resolution mapping with the objective of characterizing and utilizing genes of interest; and establish a cooperative mapping project ranging from molecular genetics to breeding that will be an organizational model for cereals and other crop plants. The fiscal year 1995 grant proposal has been received and is being processed. The principal researcher believes barley breeders nationwide need information about the location of agriculturally important genes controlling resistance to biotic and abiotic stresses, yield, and quality factors in order to rapidly develop new, improved cultivars and respond to disease and pest threats. This project provides that information along with appropriate molecular markers to track these traits through the breeding and selection process. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research.

The original goal of this project has been to develop a restriction fragment length polymorphism map for barley and associated important genetic traits as a map to provide closely linked molecular markers for barley breeders. The project successfully mapped 300 molecular markers. Portions of the map are described as very dense and contain key location points for enhanced utility. The project is now using the map to locate quantitative traits loci of economic importance. These include genetic determinations for yield, maturity, rust resistance, plant height, seed dormancy, and components of malting quality. Technical papers have been published to report research results to the scientific community.

Grants have been awarded from funds appropriated as follows: fiscal year 1990, \$153,000; fiscal year 1991, \$262,000; fiscal years 1992–1993, \$412,000 per year; fiscal year 1994, \$387,000; and fiscal years 1995–1997, \$348,000 each year. A total of \$2,670,000 has been appropriated. The nonfederal funds and sources provided for this grant were as follows: \$203,760 from industry in 1991; \$212,750 from industry in 1992; \$115,000 from industry in 1993; and \$89,000 from industry in 1994; and \$35,000 from the State of Washington and \$108,000 in other nonfederal funding, for a total of \$143,000 in 1995. An estimated total of \$163,000 of non-federal funds supported this project.

Research is being conducted in the following state agricultural experiment stations; Oregon, Colorado, Washington, Montana, Idaho, North Dakota, Minnesota, New York Virginia and California. The original objective of the “Regional Barley Gene Mapping Project” was to produce a genetic map of agronomically important traits of the barley genome. The anticipated time to complete this task was estimated at 10 years with completion in 1999. Many important genes have been mapped, some of which are being used to improve barley cultivars. Keeping with the Administration’s policy of awarding research grants competitively, no further Federal funding for this grant is requested.

This project is made up of many competitively awarded subprojects that are reviewed annually by a peer panel and selected for relevance to the original objective and scientific merit of the proposed research. This project has been judged as an exceptionally productive project which serves as a model for multiinstitutional, multidisciplinary competitively awarded research projects.

REGIONALIZED IMPLICATIONS OF FARM PROGRAMS

The purpose of this research is to estimate the impacts of farm, trade, and fiscal policies and programs and assess their alternatives on the economic viability of typical crop and livestock production operations located in different regions of the United States. The principal researcher believes there is a need for research that provides an assessment and evaluation of the potential impacts of Federal farm, trade, and fiscal policies on the economic viability and competitiveness of farmers located in different regions of the United States. Policy impacts vary regionally because of differences in farm productivity, input costs, climate, farm enterprises and size. The research results are widely used by farmers and public policymakers concerned about minimizing policy and program inequities between regions and farm sizes. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Spe-

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cial Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research.

The original, as well as current, goal was and continues to be to provide the farm community, extension, and public officials information about farm, trade, and fiscal policy implications by developing regionalized models that reflect farming characteristics for major production regions of the United States. The researchers have developed a farm level policy analysis system encompassing major U.S. farm production regions. This system interfaces with existing agricultural sector models used for farm, macroeconomic, and trade policy analysis. The universities have expanded the number and types of representative farms to 80. Typical farm models also are being developed for Mexico and Canada under a collaborative agreement for use in analyzing impacts of the North American Free Trade Agreement. Some 25 policy studies were completed this past year at the request of policymakers and farm groups including analyses of the impacts of various farm policy proposals on representative crop farms in the U.S., elimination of the rice program, conservation reserve program impacts on farms in the Great Plains, and revised baseline projections for representative farms. The representative farms were used extensively for analysis of farm level impacts of the alternative farm program proposals considered for the 1996 Farm Bill as well as implementation alternatives after passage of the Bill.

The work supported by this grant began in fiscal year 1990 and the appropriation for fiscal year 1990 was \$346,000. The fiscal years 1991–1993 appropriations were \$348,000 per year; \$327,000 in fiscal year 1994; and \$294,000 in each of the fiscal years 1995 through 1997. A total of \$2,599,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$288,843 State appropriations and \$46,773 industry for a total of \$335,616 in fiscal year 1991; \$45,661 State appropriations in fiscal year 1992; \$33,979 State appropriations in fiscal year 1993; \$40,967 State appropriations in fiscal year 1994; \$161,876 State appropriations in fiscal year 1995; \$187,717 State appropriations for fiscal year 1996; and \$137,100 for fiscal year 1997.

Research is being conducted by the Texas A&M University and University of Missouri at Columbia. The researchers believe this program is of a continuing nature for the purpose of assessing the impacts of existing policies and issues and proposed policy and program changes at the individual firm level for feed grain, wheat, cotton, rice, oilseed and livestock producers. In keeping with the Administration's policy of awarding research grants competitively, no further Federal funding is requested for this grant. No formal evaluation of this project has been carried out.

RICE MODELING

The purpose of this research project is to develop a rice industry model with domestic and international components to aid U.S. farmers, millers, and policymakers in making production, investment, marketing and public policy decisions. Research is needed to assist both the U.S. rice industry and national policymakers in assessing the impact of existing and proposed changes in public policies for rice. This research enables improved analysis of both international and domestic policy changes on rice production, stocks, prices of substitute crops and consumption. However, in view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research. The original goal of this research was to develop international, national and regional models to analyze the impact of foreign and domestic policy changes, and forecast changes in production, stocks, prices of substitute crops and consumption.

The work supported by this grant began in fiscal year 1996. The appropriation for fiscal years 1996 and 1997 was \$395,000 for a total of \$790,000. For the 1996 fiscal year, state appropriations are estimated to be \$178,000; and for 1997, approximately \$150,000.

The research is being carried out at the University of Arkansas-Fayetteville and the University of Missouri-Columbia. The researchers anticipate that the domestic portion of the rice model will be complete by September 30, 1997. The international modeling research is a little over half completed and the researchers estimate another 5 years is required. In keeping with the Administration's policy of awarding research grants competitively, no further Federal funding is requested for this grant.

We have conducted no formal evaluation of this project. However, each annual proposal is carefully reviewed for adherence to stated objectives and annual progress is discussed with the principal investigators.

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RURAL DEVELOPMENT CENTERS

The overall objectives of the research agenda of the five rural development centers are to: Improve economic competitiveness and diversification in rural areas; support management and strategic planning for economic development; create community capacity through leadership; assist in family and community adjustments to stress and change; and promote constructive use of the environment. The function of the Centers is to increase the productivity of regional faculty both in doing research on rural issues and in using that research to do effective outreach with rural communities. The number of research faculty who are addressing broader rural issues is declining in many places. The multi-disciplinary, multistate, work supported by the Centers becomes even more crucial in a period of reduced research emphasis. Critical needs are being met by Center support including public lands policy, changing rural migration patterns, fiscal alternatives for local governments, and forest stewardship education. Specific needs for regional research are reviewed annually by the Centers. The focus of proposals varies from year-to-year depending on the shifting priorities.

The Rural Development Center mission is to strengthen rural families, communities, and businesses by facilitating collaborative socio-economic research and extension through higher education institutions in the various regions. These program objectives are also consistent with one of the 5 major goals discussed in the fiscal year 1999 Performance Plan for the REE Mission Area. Research programs are undertaken after evaluating broader regional and national priorities. Following are some accomplishments of selected research activities conducted under the auspices of various centers. A group of economists from Oregon, Washington, and Nevada used recent developments in regional economic modeling to look at the effects on rural and urban economies of reduced timber harvests in Oregon and of limited grazing on public lands in northern Nevada. Rural-Urban Interdependence and Natural Resource Policy, a publication recently released by the Western Rural Development Center, reports these studies in detail. This report reflects core-periphery input-output modeling that has grown out of an earlier research project supported by the Center. Northeast Center staff have been working with faculty of the University of Minnesota Extension Service and West Virginia University Extension Service to alter and condense a business retention and expansion notebook. Retaining and expanding existing businesses in communities is an effective alternative approach to industrial recruitment. The resulting publication will appeal to and be appropriate for use by community leaders/volunteers interested in helping businesses maintain or expand their services in their community. The community development approach to solving business problems is what makes these materials so appealing. The authors are in their final stages of editing, and the materials should be available for purchase by the spring of 1997.

Grants have been awarded from funds appropriated as follows: fiscal year 1971, \$75,000; fiscal year 1972, \$225,000; fiscal year 1973, \$317,000; fiscal years 1974–1981, \$300,000 per year; fiscal years 1982–1985, \$311,000 per year; fiscal years 1986–1987, \$363,000 per year; fiscal year 1988, \$475,000; fiscal year 1989, \$500,000; fiscal year 1990, \$494,000; fiscal years 1991–1993, \$500,000 per year; fiscal year 1994, \$470,000; and fiscal years 1995–1997, \$423,000 per year. A total of \$9,695,000 has been appropriated.

Non-federal funds available to the four Regional Centers for Rural Development were: fiscal year 1991, \$1,117,000; fiscal year 1992, \$790,000; fiscal year 1993, \$900,000; fiscal year 1994, \$776,591; and fiscal year 1995, \$710,050; for a total of \$4,293,641 across the five years for which there are complete data.

The regional rural development centers include the following: Northeast Regional Center for Rural Development, Pennsylvania State University; North Central Regional Center for Rural Development at Iowa State University; Southern Rural Development Center at Mississippi State University; and Western Rural Development Center at Oregon State University. There is also a rural development project at North Dakota State University which receives funding from the annual Rural Development Centers appropriation. Most of the research sponsored by the four regional centers is actually performed by resident faculty at landgrant universities in the respective region through subcontracts from that center's grant. The regional rural development centers were established to provide an on-going "value added" component to link research and extension and by doing so to increase rural development under the special conditions in each region. The work of the Centers is being carried out in all 50 states and in some territories. The Centers compile a report of annual accomplishments and share those with the states in the region. The list of needs is constantly evolving and is being addressed through projects that are matched to the

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constantly shifting local agenda. The current phase of the program will be completed in 1997.

The Centers enlist the help of advisory committees that help establish operating rules and provide professional, technical counsel and peer evaluation of Center projects. Advisory committee members are qualified to fulfill these roles because they are directly involved in the scholarship of rural development and are knowledgeable on changing issues in rural areas. Specific site evaluations have been undertaken as follows:

Western Rural Development Center—November 1994
North Central Center—July 1992
Northeast Center—May 1993
Southern Center—August 1995

RURAL POLICIES INSTITUTE

The Rural Policy Research Institute (RUPRI) is a consortium of three universities designed to create a comprehensive approach to rural policy analysis. The Institute conducts research and facilitates public dialogue to increase public understanding of the rural impacts of national, regional, state, and local policies on rural areas of the United States. There is a need to be able to estimate the impacts of changing programs and policies on rural people and places. Objective public policy analysis can provide timely and accurate estimates of the impacts of proposed policy changes to allow more reasoned policy discussions and decisions. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding sources could be used to support this research. The original goal of the Rural Policy Research Institute was to create a new model to provide timely, accurate, and unbiased estimates of the impacts of policies and new policy initiatives on rural people and places. The Institute has completed a number of successful policy research projects and developed three analytic models central to its mission. These Projects focus on the rural implications of health care, education, housing, rural development, tax and telecommunications policy proposals. In addition, the Institute uses expert panels to provide policy decision support to a number of policy making groups at national and State levels.

The work supported by these grants began in fiscal year 1991 and the appropriation for fiscal year 1991 was \$375,000. The fiscal year 1992 appropriation was \$525,000; for fiscal year 1993, \$692,000; for fiscal year 1994, \$494,000; and fiscal years 1995 to 1997, \$644,000 each year. A total of \$4,018,000 has been appropriated.

Aggregated non-federal funds to support the Rural Policy Research Institute across the three universities involved include unrecovered indirect costs, salary support from university and other non-federal sources, and various other grants, contracts, and reimbursable agreements. They amounted to \$316,458 for fiscal year 1991; \$417,456 in fiscal year 1992; \$605,302 in fiscal year 1993; \$537,834 in fiscal year 1994; \$584,516 in fiscal year 1995; \$576,782 in fiscal year 1996; and \$186,859 in 1997. Total non-federal funding to date is \$3,225,207.

The Institute's member universities are: the University of Missouri-Columbia; the University of Nebraska-Lincoln; and Iowa State University, Ames. Current funding will sustain activity through January 1998. In keeping with the Administration's policy of awarding research grants competitively, no further Federal funding is requested for this grant.

We have conducted no formal evaluation, however, annual project proposals are carefully reviewed, as are policy analyses produced by RUPRI.

SEAFOOD HARVESTING, PROCESSING, AND MARKETING, MISSISSIPPI

Research related to seafood safety, quality and by-product utilization has been supported by this grant. Compounds that are generally recognized as safe and naturally occurring viruses have been tested for their potential to control pathogenic *Vibrio vulnificus* that is associated with gastroenteritis and fatal septicemia following consumption of raw oysters. The researchers have also evaluated a new impedance technology to objectively and rapidly determine the freshness of seafoods. Researchers are also testing steam pasteurization to reduce catfish microflora and extend shelf life. The principal researcher believes that needs reflected in the project include providing consumers with affordable alternative seafood products. Alternative sources of seafood protein are needed because of a drastic decline in natural harvests due to overexploitation. Other needs addressed in this project include reducing pollution during seafood and aquaculture food processing by converting by-products into value-added food ingredients or materials. A regional interest for the

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Gulf coast is the potential devastation of the oyster industry if harvests are severely restricted during warm months. The present project seeks to provide alternative processing strategies to control foodborne disease agents in oysters. Locally, catfish processors are a major employer of the severely economically depressed Delta region of Mississippi. By further enhancing the value of catfish products, this project seeks to improve the livelihood of individuals both on the Gulf coast and in the aquaculture region of the state. In view of significant needs for research in high priority national interest topics such as improved pest management systems and food safety, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research.

The original goals of the research were to improve the quality and safety of catfish and improve the utilization of catfish byproducts and underutilized marine species. Due to successes of the original project, subsequent efforts are focusing on additional uses of seafood and aquaculture foods by improving processing strategies and providing alternative products from waste materials. The project has thus expanded to include crab, shrimp, oysters, freshwater prawns, hybrid striped bass, and crawfish.

The work supported by this grant began in fiscal year 1990 when \$368,000 was appropriated for this project. The appropriations for fiscal years 1991-1993 were \$361,000 per year; fiscal year 1994, \$339,000; and fiscal years 1995-1997, \$305,000 each year. A total of \$2,705,000 has been appropriated.

The State of Mississippi contributed \$1,949 to this project in fiscal year 1991; \$41,286 in fiscal year 1992; \$67,072 in fiscal year 1993; \$91,215 in fiscal year 1994; \$147,911 in fiscal year 1995; and \$61,848 in fiscal year 1996. Product sales contributed \$7,044 in 1991, \$13,481 in 1992, \$13,704 in 1993, and \$5,901 in 1994. Industry grants contributed \$14 in 1992 and \$31,796 in 1993. Other non-federal funds contributed \$80 in fiscal year 1991, \$838 in 1992, and \$17,823 in 1993. The total non-federal funds contributed to this project from 1991 through 1996 was \$501,962.

Research is being conducted by scientists in the Departments of Food Science and Technology and Agricultural Economics of the Mississippi Agricultural and Forestry Experiment Station at Mississippi State University and at the Coastal Research and Extension Center, Seafood Processing Laboratory, in Pascagoula, Mississippi. The principal investigators anticipate that research on the original objectives will be completed in 1999. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula or other funds.

An agency science specialist conducts a merit review of the proposal submitted in support of the appropriation on an annual basis. Since the agency has not yet received the proposal in support of the fiscal year 1997 proposal, the last review of the proposal was conducted on March 18, 1996. At that time, the agency science specialist believed that the projects addressed needs and interests of the regional seafood and aquaculture industries.

SMALL FRUIT RESEARCH

Research carried out using funding for this Special Research Grant has been to enhance the production and quality of small fruits in the Pacific Northwest which includes Idaho, Oregon, and Washington. Research has been focused on cold hardiness, breeding and genetics, and pest management. The principal researchers believe Washington, Oregon, and Idaho are important states for growing, processing, and marketing small fruits such as strawberries, blackberries, raspberries, grapes and cranberries. Research is needed to help solve the myriad of problems in order to remain competitive and expand markets. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding sources could be used to support this research.

The original goal of this project was to improve the production and quality of small fruits in the Pacific Northwest through research on cold hardiness, breeding and genetics, and pest control. Research progress to date for Oregon is the evaluation of new strawberry germplasm from Chile and North America for resistance to fruit rot, aphids, spider mites, and weevils; virus indexing of small fruit germplasm; better color stability of processed strawberries; increasing cranberry production through better weed control; and improving wine quality. Work is continuing in Washington on fruit physiology; cold hardiness of strawberries, grapes, and red raspberries; pest management of cranberries; and breeding of pest resistant strawberries. Idaho work continues on postharvest research for better marketability and adapting small fruit crops to high elevation growing conditions. Oregon and Wash-

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ington are jointly carrying out marketing studies to identify new market niches for berry crops and wines.

The work supported by this grant began in fiscal year 1991 and the appropriation for year 1991 was \$125,000, The fiscal years 1992 and 1993 appropriation was \$187,000 per year, fiscal year 1994 was \$235,000, and fiscal years 1995–1997 are \$212,000 each year. A total of \$1,370,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: 1991, \$1,562,078 state appropriations, \$40,933 product sales, \$62,993 industry, \$357,266 other nonfederal; 1992, \$1,465,969 state appropriations, \$90,453 product sales, \$119,164 industry, \$287,976 other nonfederal; 1993, \$1,539,255 state appropriations, \$91,954 product sales, \$161,141 industry, \$416,712 other nonfederal; 1994, \$368,375 state appropriations, \$45,430 industry and \$90,822 other nonfederal; and \$1,185,249 for fiscal year 1995.

The research is being conducted at Oregon State University, Washington State University and the University of Idaho. Oregon State University is the lead university. The original objectives of the project are still valid today. The main goal was to have a competitive industry to satisfy the needs of those using blueberries. However, the researchers anticipate that most of the objectives will be met within five or six years. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula funds.

These projects are evaluated on a yearly basis through a peer review mechanism set up by the University of Maine and by staff from the Cooperative State Research, Education, and Extension Service. Peer review ensures that good scientific practices and rationales are used while university and national staff reviews ensures that objectives are addressed and budgets are within the policies and regulations.

SOUTHWEST CONSORTIUM FOR PLANT GENETICS AND WATER RESOURCES

New Mexico State University, Los Alamos National Laboratory, Texas Tech University, the University of Arizona and the University of California at Riverside entered into a cooperative interdisciplinary research agreement constituted as the Southwest Consortium on Plant Genetics and Water Resources to facilitate research relevant to arid and semi-arid land adaptation. The overall goal of the Consortium is to bring together multidisciplinary scientific teams to develop innovative advances in plant biotechnology and related areas to bear on agriculture and water use in arid and semi-arid regions. The Southwest Consortium for Plant Genetics and Water Resources is addressing the need for an integrated program that identifies specific problems of southwest agriculture, coordinates water and biotechnology research aimed at solving these problems, and facilitates the transfer of this information for commercialization. The specific research objectives of the Consortium include the development of crops with resistance to: drought and temperature extremes, adverse soil conditions, and pests and parasites. The Consortium is also identifying technologies for improved water and nutrient delivery. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funding is not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding sources could be used to support this research. This research has national, regional and local applications.

The original goals of this Consortium remain to facilitate research to provide solutions for arid and semi-arid crop adaptation. Five participating institutions have developed research plans consistent with the Consortium's goals. Subgrants are awarded competitively following peer review to support research that would solve problems unique to southwest agriculture. Specific attention is given to interdisciplinary agricultural research. The Consortium has discovered a gene that makes plants more resistant to water stress. They have identified a genetic marker for salt tolerance and have compared a genetic system of wild plant species to domestic crops for differences in drought response. One research team has cloned a gene from alfalfa that controls an important biosynthetic pathway, another is working out the complex metabolism of salt tolerance in resistant plant types, and other teams have identified genes involved in pest resistance, herbicide tolerance and nutritional enhancement of arid-land forage.

Grants have been awarded from funds appropriated as follows: fiscal year 1986, \$285,000; fiscal years 1987–1989, \$385,000 per year; fiscal year 1990, \$380,000; fiscal years 1991–1993, \$400,000 per year; fiscal year 1994, \$376,000; and fiscal years 1995–1997, \$338,000 each year. A total of \$4,410,000 has been appropriated.

The Consortium's host institution, New Mexico State University, reports matching nonfederal funds of \$80,000 in state appropriations in 1992; \$100,000 in 1993;

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\$100,000 in 1994; \$100,000 in 1995; and \$100,000 estimated in state appropriations for 1996. These funds exist in the form of researchers' salaries, facilities, equipment maintenance and administrative support.

Research is being conducted by a consortium of institutions comprised of New Mexico State University, Los Alamos National Laboratory, Texas Tech University, University of Arizona, and University of California at Riverside. New Mexico State University is the lead institution. The project was initiated in 1986 and accomplished significant results in the first five years. Currently additional and related objectives have evolved and anticipated completion date for these is 2001. Many of the objectives of this research have been met. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding is requested. Research could be continued at the State's discretion using formula funds.

Each year the grant is peer reviewed and reviewed by CSREES's senior scientific staff. A summary of that review indicated excellent progress in achieving the objectives.

SOYBEAN CYST NEMATODE, MISSOURI

The research being funded by this grant is crucial to the development of effective management strategies to understanding host-parasite relations of the pathosystem and each of its components. Two new nematode resistant soybean lines have been or will be released in 1996. The need for breeding soybean lines to develop resistant varieties with a broad spectrum of resistance continues. More fundamental research involves the utilization of new molecular technologies to identify genes responsible for resistance. Other aspects of the works relate to field management strategies for these nematodes including cultural and biological applications. The soybean cyst nematode, *Heterodera glycines* is the most serious pest of soybean in the United States. The problems continue to increase in the Midwest where 12 states have yield reductions in soybean because of this nematode. Due to the nematodes' ability to adapt to resistant varieties over time, new varieties are continually needed. Because there are significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research.

The original goal of this research was managing the soybean cyst nematode, *Heterodera glycines* through the development of new resistant soybean varieties and the use of biological and cultural management strategies. To date, a new soybean variety that has resistance to *Heterodera glycines* race 3 and moderator resistance to race 14 has been developed and will be released shortly. This variety also has resistance to *Phytophthora sojae*. Further, approximately 1,000 lines resulting from resistant soybean lines were selected for progeny row planting and 150 lines advanced to 1996 yield tests. Delsoy 5500, a soybean variety in maturity group V, was released in 1996 to five state experiment stations. A single dominant gene was determined to be a condition of resistance by two PI lines of soybean for *Heterodera glycines*, race 3 while there was a two gene difference between two PI line for race 5. The cultural studies involving no-till and disk-till varied in different locations while the effects of six cropping sequences indicated that *Heterodera glycines* can develop in the winter on certain host crops.

This is a renewal of grant that started in 1991. Grants have been awarded from funds as follows: fiscal year 1980-1981, \$250,000 per year; fiscal year 1982, \$240,000; fiscal years 1983-1985, \$300,000 per year; fiscal years 1986-1989, \$285,000 per year; fiscal year 1990, \$281,000; fiscal year 1991, \$333,000; fiscal years 1992-1993, \$359,000 per year; fiscal year 1994, \$337,000; and fiscal years 1995-1997, \$303,000 per year. A total of 5,358,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$105,012 state appropriations in 1991; \$84,368 state appropriations in 1992; \$168,017 state appropriations in 1993; \$118,725 state appropriations in 1994; \$33,498 state appropriations in 1995; and \$33,723 state appropriation in 1997.

This research is being conducted at the Missouri Agriculture Experiment Station and the University of Missouri. The anticipated completion date for the major objectives was 1996. Many of the objectives are being met but genetic interaction of the soybean cyst nematode/soybean is extremely complex. The anticipated completion date of the continuing research is 1998. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

The last evaluation of this project was a merit review in December, 1996. In summary, continued development of new management strategies for the soybean cyst nematode is extremely important.

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SPATIAL TECHNOLOGIES FOR AGRICULTURE, MISSISSIPPI

CSREES has requested the university to submit a grant proposal that has been received, and is being reviewed. This project will evaluate the Components of Advance Spatial Technology for Agriculture (ASTA), also known as precision farming, to improve the level of Crop Management and thereby improve farm income while avoiding adverse environmental impacts. Integration of ASTA Components included computers, Global Positioning, Geographic Information System and Yield Monitor will permit combining yield maps with agronomic data and variable rate technology for application of seed fertilizer and pesticides, as well as other management practices to specific sites as precisely the right amounts for optimum production with minimum inputs. The proposed research under this Special Research Grant will focus on evaluation of site-specific technology evaluation and utilization for the major agronomic crops in Mississippi. In addition, the technology evaluation information would apply to many other crops where precision farming systems are used. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research. The original goal of this project is to develop production management strategies utilizing site-specific technologies to enhance crop production efficiencies and environmental quality.

The work supported by this grant begins in fiscal year 1997, and the appropriation for fiscal year 1997 is \$350,000.

Research will be conducted at the Mississippi Agricultural Experiment Station. The principal investigators anticipate the completion date for these objectives to be in 2002. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. The proposal for the initial year's funding is currently under agency review.

STEEP III—WATER QUALITY IN PACIFIC NORTHWEST

The STEEP III study was established in 1996 as the third phase of the tri-state STEEP Program entitled "Solutions to Environmental and Economic Problems," to meet the needs of farmers and ranchers in the Pacific Northwest in solving severe problems with soil erosion and water quality, while maintaining economically and environmentally sustainable agricultural production. The principal researcher believes the Pacific Northwest wheat region is subject to severe wind and water erosion, which has taken a heavy toll of the topsoil in a little more than 100 years of farming. Due to the hilly terrain, water erosion has reduced potential soil productivity in the high rainfall areas of the region by about 50 percent. Wind erosion has reduced productivity on the sandy soils in the lower rainfall areas. Also, off-site environmental costs of water erosion are large. Although many of these are difficult to measure, they include damage from sediment to recreational areas, roadways, and other areas which costs taxpayers millions of dollars annually. Wind erosion, which occurs mostly in the spring and fall, also can be costly and environmentally damaging, and causes increasing concerns for human health and safety from blowing dusts. Water quality degradation is of increasing concern in the agricultural areas of this region, since sediment is a major pollutant of surface water runoff which may contain varying amounts of chemicals. The complex hydrology of the region's landscape has made it difficult to identify the sources of these chemicals in surface and ground waters. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research.

The primary goals are: to obtain and integrate new technical/scientific information on soils, crop plants, pests, energy, and farm profitability into sustainable management systems; to develop tools for assessing the impacts of farming practices on soil erosion and water quality; and to disseminate conservation technology to the farm. The original STEEP and STEEP II projects for erosion control, and the successor STEEP III program for erosion and water quality control, have provided growers a steady flow of information and technologies that have helped them meet economic, environmental, and resource conservation goals. Through the adoption of these technologies, the researchers believe wheat growers have been able to reduce soil erosion, improve water quality, and maintain or increase farm profitability. This has been accomplished through a tri-state, multi-disciplinary approach of basic and applied research and through technology transfer and on-farm testing to assist growers with applying these research findings on their farms. The on-farm testing program has been especially successful because growers are involved directly in the research and education effort. For example, the on-farm testing program has evalu-

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ated conservation options that growers can use to meet Farm Bill conservation compliance requirements. STEEP programs have helped position farmers with new conservation technologies well in advance of deadlines to meet current and anticipated policy requirements. This preparation protects farmers against potential penalties and loss of government program benefits.

The work supported by this grant began in fiscal year 1991, and the appropriations for fiscal years 1991–1993 were \$980,000 per year; in fiscal year 1994, \$921,000; in fiscal year 1995, \$829,000; and in fiscal years 1996 and 1997, \$500,000 per year. A total of \$5,690,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$938,812 state appropriations, \$63,954 product sales, \$156,656 industry, and \$16,994 miscellaneous in 1991; \$1,025,534 state appropriations, \$75,795 product sales, \$124,919 industry, and \$88,696 miscellaneous in 1992; \$962,921 state appropriations, \$62,776 product sales, \$177,109 industry and \$11,028 miscellaneous in 1993; \$1,069,396 state appropriations, \$46,582 product sales, \$161,628 industry, and \$22,697 miscellaneous in 1994; and \$1,013,562 state appropriations, \$31,314 industry, and \$107,151 miscellaneous in 1995. In 1996, Washington received \$231,724 in state appropriations; Oregon passed Measure 5 which reduced revenues and imposed funding restrictions so they were unable to provide any non-Federal cost-sharing or matching funds; and Idaho contributed \$81,525 state support, and \$86,242 in estimated non-Federal grant support, for a total non-Federal contribution of \$167,767.

The work under STEEP III will be done at laboratories and field research sites at the University of Idaho, Oregon State University, and Washington State University. Cooperative on-farm testing will be conducted in cooperation with growers on their fields in Idaho, Oregon and Washington. The STEEP II project was completed in 1995. The results are compiled and are available as of January 1997 in a final, 5-year report. The STEEP III project started in 1996 and will continue through the year 2000 as a 5-year project. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula funds.

The Cooperative State Research, Education, and Extension Service program manager annually reviews progress reports and proposes new research on the STEEP Program, and attends the annual meetings to assess progress. However, the program is evaluated each year by three committees: grower, technical, and administrative. Annual progress is reported at an annual meeting and compiled into written reports. These reports and the meeting are reviewed annually. Grower and industry input is solicited at the annual meeting on research objectives and accomplishments.

SUSTAINABLE AGRICULTURE, MICHIGAN

This project is intended to develop agricultural production systems that are highly productive and profitable as well as being environmentally sustainable. More specifically, this project will examine how to achieve a high nutrient flow from soil to crops and animals, and back to soil, with low loss to ground and surface waters. The principal researcher believes there is a need to better understand the biological processes occurring in Michigan's high-nutrient-flow crop and animal systems. With high water tables, networks of lakes and slow-moving streams, and concern about environmental standards, field contamination by agricultural production materials is a high priority. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. In addition, funding for these projects could potentially be available through a competitive grant under the Sustainable Agriculture Research and Education program. The specific goals of this research are to develop an agroecological framework for decision-making, develop crop and cover crop rotations, develop water table management strategies, and develop rotational grazing systems. Accomplishments to date include an extension publication on agroecology, development of on-farm compost demonstration sites, collection of research data and computer software models on water table management, and completion of initial research trials on rotational grazing at three sites in Michigan.

The work supported by this grant began in fiscal year 1994 with an appropriation of \$494,000; \$445,000 were appropriated in fiscal years 1995 through 1997, bringing total appropriations to \$1,829,000. Matching funds were provided at the state level for \$511,900 in fiscal year 1994, \$372,319 in fiscal year 1995, and \$359,679 in fiscal year 1996.

This work is being carried out in Michigan at several locations by Michigan State University. Locations include the Kellogg Biological Station and the Upper Peninsula Experiment Station. This project is currently scheduled to go through March

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31, 2000. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

Findings from this project have demonstrated that rotational grazing reduces production costs, and increases net profits, compared to traditional cow management. This project has also shown that composting is an effective way of stabilizing livestock waste, controlling odor, and improving nutrient composition for later land application. The computer modeling done with this project has shown reduced contamination of ground water through alternative management practices employed in the project.

SUSTAINABLE AGRICULTURE AND NATURAL RESOURCES, PENNSYLVANIA

This project studies the cycling of nutrients from animal agricultural production systems through soil and water into crops and back to food for animals or directly to humans in the case of vegetable production. Environmental degradation is a major concern of agricultural production near urban areas, especially with regard to pest management and pesticide use, nutrient loading of soils and water associated with chemical fertilizers and animal and poultry manures. However, in view of significant needs for research in high priority national interest topics such as improved pest management, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funds could be used to support this research. In addition, funding from the Sustainable Agriculture Research and Education (SARE) competitive grants program could be available for this type of research. The original goal of this research was to understand the cycling of nutrients from animal agricultural production systems through soil and water into crops and back to food for animals or directly to humans in the case of vegetable production. Conventional science in the late 1980's and early 1990's held that if only all animal wastes were composted, the nutrient management problems would disappear. However, the results of this research to date show that this is a more complex problem. If farmers are to manage their farm lands properly, indicators of soil quality and health must be developed that can be used by agricultural producers and consultants. Efforts under this project have been devoted to this goal.

The work supported under this grant began in fiscal year 1993. The appropriation for fiscal year 1993 was \$100,000, and \$94,000 was appropriated in each of the fiscal years 1994 through 1997 for a total of \$476,000. A total of \$195,901 in matching support from university, state and private industry sources was provided in fiscal year 1996.

Research is being conducted by the Pennsylvania State University with cooperators throughout the state. The anticipated completion date for the overall original project objectives in 1998. It is anticipated that the original objectives will be met at the end of 1998. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

There has not been a formal evaluation of this project, but progress reports have been submitted to the agency and reviewed by our scientific staff.

SUSTAINABLE AGRICULTURE SYSTEMS, NEBRASKA

This project is aimed at integration of field crops, animal production, agroforestry, livestock waste management, and diversified enterprises to meet production, economic, and environmental quality goals. Farmers and ranchers in Nebraska and throughout the Midwest face increasing difficulties in maintaining profitable operations that are sustainable under increased production costs and more stringent environmental regulations. They continue to seek alternative production systems, integration of crop and animal enterprises, value-added products, including those from woody perennials, and new marketing approaches to secure more of the food dollar. Work on crop residue utilization is highly important to assess the loss of erosion mitigation when grazing occurs as well as the benefits of winter forage to production of lean beef. Erosion is still a major problem with monoculture cropping, and work with contour strips, residue management, and animal grazing is essential to provide good recommendations to farmers for how to manage fragile lands. However, in keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this Special Research grant is requested. At the discretion of the State, Hatch Act or other funding could be used to support this research. In addition, funding for these projects could potentially be available through a competitive grant under the Sustainable Agriculture Research and Education program. This project has involved several components, with a number of results to date. In improving erosion control through grazing, calves were fed cornstalks from October through March, and fed some supplements. The calves had lower costs of production, and reduced need for grain feed. The researcher's work on integrative

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cropping and agroforestry has shown that diversifying rotations centered around soybeans has provided increased economic returns. In the objective dealing with compost utilization, compost has provided increased sources of nitrogen and improved soil quality. Reports from this project have been disseminated through extension and through a sustainable agriculture newsletter.

This project began in fiscal year 1992, with an appropriation of \$70,000; subsequent appropriations are as follows: \$70,000 in fiscal year 1993; \$66,000 in fiscal year 1994; and \$59,000 in fiscal years 1995 through 1997. Total appropriations to date are \$383,000. Matching funds provided for this research include state funds in the amount of \$25,313 for fiscal year 1992, \$26,384 for fiscal year 1993, \$27,306 for fiscal year 1994, and \$36,091 in fiscal year 1995.

Research is being conducted by the University of Nebraska at several locations in Nebraska, with the major part of the project at the Agricultural Research and Development Center near Mead, Nebraska. The current project proposes work through March 31, 1998. It is expected that current objectives of the project will be met by this time period. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested. Findings from this project have shown that young cattle can be fed with lower costs if cornstalks are used as part of their ration. This system also allowed for a cropping pattern that reduced erosion. The corn, soybean, and agroforestry system showed the highest net income of the systems tested.

SUSTAINABLE PEST MANAGEMENT FOR DRYLAND WHEAT, MONTANA

This research will address pest issues of the dryland wheat areas of eastern Montana. The proposed research is specifically designed to address pest issues of the dryland wheat area of eastern Montana. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research. The original goal of this research was to provide pest management information to dryland wheat producers of eastern Montana where crop loss can approach \$100 million per year.

The work supported by this grant begins in fiscal year 1997 and the appropriation for fiscal year 1997 was \$200,000.

Research will be conducted at Montana State University Experiment Station. The project is proposed for a duration of 3 years and therefore should be completed after fiscal year 1999. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

The expected completion date of the project is fiscal year 1999. Assessment of the precision of biological control organisms and estimates of profitability, marketability, and risk will be used to assess progress.

SWINE WASTE MANAGEMENT, NORTH CAROLINA

CSREES has received the grant proposal from North Carolina State University and is being processed at this time. The objectives of this project are: (1) to develop a prototype system for treatment of animal waste which will be used to study and optimize a new and innovative swine waste management treatment process; (2) to provide funds for additional technical staff to perform the work under this project; (3) to purchase additional analytical equipment; and (4) to provide funding for operation of the prototype facility. The prototype facility will consist of a set of eight tanks which will be connected by piping or hoses to enable researchers to test a variety of different strategies for treatment of animal waste, including anaerobic or aerobic digestion, removal of nutrients such as nitrogen and phosphorus, and alterations in the sequence of these various operations. The principal researcher has stated that North Carolina now ranks second in the United States in both pork and poultry production. The problem of waste management has become critical because adequate land for application of waste is not available in some areas, water quality problems have been noted in both surface and ground waters, nutrients from several lagoon failures have created serious pollution problems in rivers and coastal areas, and communities have become less tolerant of odor problems. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research. The original goal of this research was to enhance the design, development, and implementation of alternative swine waste management strategies and treatment systems. The project is awaiting the initial award of funds so no progress can be reported at this time.

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The work supported by this grant begins in fiscal year 1997 and the appropriation for fiscal year 1997 is \$215,000. The exact amount of non-federal funds to be contributed to this project in fiscal year 1997 is not known. However, faculty time from three individuals will be contributed to this project so it is anticipated that the non-federal contribution will be substantial.

This research will be conducted at North Carolina State University in Raleigh, North Carolina. The anticipated completion date is October 1, 1997. The project is just getting started so there is no interim progress to report at this time. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

An evaluation of this project has not undertaken since fiscal year 1997 was the first year funds were appropriated for this grant.

TILLAGE, SILVICULTURE AND WASTE MANAGEMENT, LOUISIANA

This research has five components: Rice and Cotton Tillage, Dairy and Poultry Waste Management, and Bald Cypress Silviculture. More specifically, the Rice scientists are looking for ways to improve stand establishment; the Cotton scientists are focusing on the use of tillage system to combat harmful insect populations; the Waste Management Scientists are quantifying the environmental and economic effectiveness of approved dairy and poultry waste disposal systems; and the Silviculturists are conducting a problem analysis of Louisiana's Bald Cypress forest. Since the crops, forest, and waste issues extend beyond the borders of Louisiana, this research may have application outside the state. However, in view of the significant research needs on national high priority issues, funding for this project is not proposed. At the State's discretion, Hatch Act or other funding could be used to support this effort.

The original goals were to: improve conservation tillage in rice and cotton production, to determine the effectiveness of no-discharge dairy waste treatment facilities, to determine permissible poultry litter land-treatment rates, and to evaluate wetland forest regeneration problems. All components of the project have established research studies and are monitoring progress. Each year the principal investigator initiates a review of the sub-projects and, in this fashion, is encouraging good dialogue and cooperation among the sub-project investigators and their respective departments. For instance, Louisiana State University's Poultry and Forestry Scientists are working closely to establish application rates and procedures for applying poultry waste to forest plantations.

The work began in fiscal year 1994. The appropriation for fiscal year 1994 was \$235,000, fiscal year 1995 to 1996, \$212,000 each year. This totals \$659,000. State funding in support of these areas of research exceeds \$750,000 annually.

Investigations are being conducted on the main campus at Louisiana State University as well as the Experiment Stations at Calhoun and Washington Parish. The original work was scheduled for completion in 1999. Early term objectives have been met even though they suffered the loss of a promising graduate student. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

The last field evaluation was completed on December 12, 1995. The evaluation summary complimented the scientist on the interdisciplinary components associated with this project, along with their investigative procedures, report writing, and external networking.

TROPICAL AND SUBTROPICAL RESEARCH

The Tropical and Subtropical Research (T-STAR) Program is operating in coordination with the Caribbean Basin Administrative Group and the Pacific Basin Administrative Group. State Agricultural Experiment Stations that are members of the Caribbean group are Florida, Puerto Rico, and the Virgin Islands; members of the Pacific group are Hawaii and Guam. Nonmember institutional interests are represented by the Executive Director of the Southern Region Agricultural Experiment Station Directors, who is a member of the Caribbean group, and the Executive Director of the Western Region Agricultural Experiment Station Directors, who is a member of the Pacific group. The Agricultural Research Service also has representation on the two groups, as does the CSREES scientist who manages the T-STAR grant program. Funds for the program are divided equally between the two Basin Administrative Groups. The research objective of the program developed by the principal researchers is to improve the agricultural productivity of many of the subtropical and tropical parts of the United States. Special research grants have been awarded for research on controlling insect, disease and weed pests of crops; increasing the production and quality of tropical fruits, vegetables and agronomic crops;

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promoting increased beef production through development of superior pastures; detection of heartwater disease of cattle and the influence of heat stress on dairy cattle reproduction; better use of land and water resources; developing computer models for efficient crop production systems and animal feeding systems; developing computer models for land-use decisions; using biotechnology methodologies for improving plant resistance to viral and bacterial diseases; using biotechnology to develop non-chemical, or biological, strategies for controlling insect pests; and potential for growing new speciality crops. Fiscal year 1997 proposals have been requested.

The principal researchers believe there is a need for the T-STAR program to provide research-generated knowledge that enables informed choices in the responsible use of natural resources, facilitates the health and well being of American citizens through improved food safety and nutrition, provides frontline protection for the rest of the nation's farms and ranches from serious plant and animal diseases and pests, and enhances the ability of U.S. farmers to produce crops efficiently and economically and/or to introduce new crops and agricultural products with export potential to gain market share abroad. On a regional basis, the T-STAR program addresses the unique challenges of practicing tropical agriculture, that is presence of pests year-round, heat stress, post-harvest processing to meet regulatory requirements for export, etc. The local need of Americans living in tropical regions of the nation for T-STAR knowledge-based products to design and implement sustainable agricultural development within fragile tropical agroecosystems—particularly on tropical islands—and to develop new crops and niche markets. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant program. At the discretion of the States, Hatch Act or other funding could be used to support this research.

The original goal of this research was to increase the production and quality of tropical crops; control pests and diseases of plants and animals; promote increased beef production and conserve land and water resources. In fiscal year 1996, grants were supported for research on control strategies for Melon thrips; the biochemical nature of resistance to rust in nutsedge; development of bioherbicides for nutsedges; development of tomato cultivars with resistance to the spotted wilt virus; development of pheromones for monitoring and controlling the citrus root weevil; reducing the effects of heat stress in dairy cattle; development of a decision support system for vegetable production; finding cucurbits with resistance to silverleaf, developing a computer program for optimal supplementation strategies for beef and dairy cattle on tropical pastures; characterizing new strains of citrus tristeza virus in the Caribbean basin; determining the economic threshold for the citrus leaf miner on limes; using viral replicase genes to engineer rapid detection methods for geminiviruses; developing makers of bacterial spot resistance genes in tomato; breeding snap and kidney beans for resistance to golden mosaic virus and for heat tolerance; searching for resistance to papaya bunchy top disease; developing weed controls for yam production; and bioengineering ringspot virus resistance in papaya.

The operation of the tropical and subtropical research program was transferred from ARS to CSREES, with CSREES funding being first provided in fiscal year 1983. Funds in the amount of \$2,980,000 per year were appropriated in fiscal year 1983 and 1984. In fiscal year 1985, \$3,250,000 was appropriated. In fiscal years 1986, 1987, and 1988, \$3,091,000 was appropriated each year. \$3,341,000 was appropriated in fiscal year 1989. The fiscal year 1990 appropriation was \$3,299,000. The fiscal years 1991–1993 appropriations are \$3,320,000 per year; \$3,121,000 in fiscal year 1994; \$2,809,000 in fiscal years 1995–1996; and \$2,724,000 in fiscal year 1997. A total of \$46,546,000 has been appropriated.

For fiscal year 1996, more than \$1 million of nonfederal funds were provided to the T-STAR program from state appropriations. These state funds were in the form of faculty salary time commitments and indirect costs covered by the institutions.

This research is being conducted in Florida, Puerto Rico, Virgin Islands, Hawaii, and Guam. Work is also being done in other Pacific and Caribbean countries through agreements between institutions but not using federal funds. Research on tropical crop and animal agriculture to increase productivity, net profits, decrease harmful environmental impacts, conserve water, and natural resources. The need to continue with this project has been expressed by producers in the area, importers in the U.S. mainland and the institutions involved. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

The projects that are funded by the T-STAR Special Research Grant have been peer reviewed by panels of scientists in the U.S. to assure that good science is undertaken. Also as part of the grant renewal process, progress reports are reviewed

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by the two Administrative Groups and by the grant manager at the national level. Workshops in which research results and their application for agricultural production are developed every two years. Research papers are published in the appropriate regional, national, and international forums available. The development in 1995 of the Strategic Plan for T-STAR provided a mechanism to define priorities, examine program direction, and recommend operational changes. One of the principal points considered was to bring the Caribbean and Pacific Basin components closer and better coordinated. T-STAR and the coordination which it implies was an outcome that will make this program better.

URBAN PESTS, GEORGIA

This research is focused on urban pests with specific emphasis on termites and ants. The principal researcher believes subterranean termites and ants are significant economic pests in the southeastern United States. Damage and control costs for termites in Georgia were estimated at \$44.5 million in 1993. It is estimated that Professional Pest Control Operators apply over 23 million pounds of active ingredient in and around homes each year. Chemicals currently registered for controlling these pests are less efficacious than desired and applied at an intensity that exceeds most agricultural settings. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other formula funding could be used to support this research.

The goal of the termite research is to better understand the foraging activities of subterranean termites and their responses to selected environmental cues in order to tailor monitoring and predictive strategies with efficacious conventional and alternative methods of control. Specific accomplishments in the subterranean termites research in 1996 are as follows:

A third year of data on termite foraging behavior was collected and completed in 1996. Three years of data indicates Subterranean termite colonies in Georgia are 500,000 termites per colony and are characteristically smaller than those in Florida and Canada, but are within the same size range of those in Mississippi. It is believed that colonies of subterranean termites are nonindigenous to Florida and Canada and are not subject to the same competitive interactions as those colonies that are native to Georgia and Mississippi. However, structures attacked by subterranean termites in Georgia are often attacked by more than one distinct colony. Three manuscripts have been published and one is in press in this area of research. Studies with termite baits in 1995 have demonstrated the seasonality of termite feeding activity and behavior impacts the timing of application and the timeframe for expected results from termite baiting. Research in 1996 demonstrate that the active ingredient used in termite baits must display a lack of dose-mortality effects for at least two weeks to insure consistent, significant, and long-term suppression of termite activity. Three manuscripts have been published. Mitochondrial DNA preliminary work indicates that human transport of termite-infested materials is the primary mode of termite dispersion and could result in a higher frequency of hybrid formation within the *genus Reticulitermes*. One manuscript has been accepted for publication.

The research supported by this grant began in fiscal year 1991, and the appropriation for fiscal years 1991-1993 was \$76,000 per year. In fiscal year 1994 the appropriation was \$71,000 and in fiscal years 1995-1997 the appropriation was \$64,000 each year. A total of \$491,000 has been appropriated. The non-federal funds and sources provided for this grant by fiscal year were as follows: 1991—none, 1992—\$26,000, 1993—\$18,000, 1994—\$59,530 and 1995—\$59,539.

This research and technology transfer is being conducted at the Georgia Agricultural Experiment Station in Griffin, Georgia. The grants have been processed on a year to year basis pending the availability of funds, however, the original objectives were essentially a five- to eight-year plan of work. CSREES entomologists judge that excellent progress has been made on foraging behavior and the identification and development of termite baits. The publication of the research results has also been excellent. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

This project has been evaluated on an annual basis by CSREES, and the progress has been excellent. Last year we documented the progress on foraging behavior, genetic isolation of termite colonies, new chemistry soil termiticides, the killing potential and repellency of several strains of the fungus *Metarhizium anisopliae*, termite baits and feeding activity and behavior that impacts the time frame for expected results from termite baiting. A peripheral objective on Argentine ants was completed last year with the development of commercial baiting stations used on the outside

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periphery of buildings. This method was proven effective in preventing infestations in apartment complexes and reducing ant complaints by residents.

VITICULTURE CONSORTIUM, NY & CA

The University of California and Cornell University in New York received funding in the spring of 1996 for research on varietal responses of grapes, modeling of water requirements, management of diseases including phyloxera and other cultural aspects of grape production. The fiscal year 1996 funds will be used by the lead institutions to fund projects in the various grape producing states within their region. The research being carried out is designed to help the viticulture and wine industries remain competitive in the United States and in the global market. Both these industries have a positive effect on the United States balance of payments. In view of the fact that there are significant needs for research in other high priority national interest topics, such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other funding could be used to support this research. The original goal of this research is to maintain or enhance the competitiveness of the U.S. viticulture industry in the global market.

Grants have been awarded from funds appropriated as follows: fiscal year 1996, \$500,000; fiscal year 1997, \$500,000. The non-federal funds used in conjunction with this grant have not been accounted for because these projects are in their first year and have not yet been evaluated. However, monitoring of non-federal funds used to further the projects will be carried out.

Research is being conducted in various states which include California, Washington, New York, and Pennsylvania. A recent review of the project revealed the research priorities set by the guidance group were not all addressed nor will they be in the near future. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

WATER CONSERVATION, KANSAS

This research program is designed to develop and disseminate technical and economic information on the efficient use of water for irrigated crop production in western Kansas. The following objectives comprise this program for the fifth year of the project:

1. develop regression models to estimate the longevity of subsurface drip irrigation systems using calculations of annual system performance deterioration based on 11 years of operating pressures and flow rates;
2. develop efficient advanced irrigation management procedures for subsurface drip irrigation systems for corn;
3. identify and evaluate the technically and economically feasible modifications to irrigation systems for irrigation of corn, wheat and grain sorghum as affected by well capacity, institutional water restrictions, and the new federal farm program and;
4. increase the availability of irrigation research information and best management practice recommendations to Kansas irrigators through a series of extension bulletins and updates based on research-based information.

An advanced study was conducted to evaluate the water use efficiency of high frequency deficit subsurface drip irrigation for corn production. The 1994-1996 results indicate that corn yields can be maintained at a level nearly equal to fully irrigated crop production at significantly lower water inputs when daily deficit irrigation is used. An advanced substudy was initiated in 1996 to develop water/land allocation strategies for corn using subsurface drip irrigation. This substudy was initiated as a result of the changes in the federal farm program which allow greater planning flexibility. These changes removed the need of irrigators to protect base acreages, so economic efficiency will be a strong determinant in water/land allocation strategies. This substudy along with economic and system longevity analyses will be continued in 1997.

Water is a precious resource to farmers in the Great Plains. Corn is a principle crop for feeding livestock. To produce corn in the Great Plains, additional water applied as furrow irrigation enhances production. The most common irrigation methods are furrow irrigation or center pivot irrigation. The need to conserve water has turned attention to drip irrigation as an efficient alternative. In view of significant needs for research in other high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research.

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The research goal is to determine the feasibility of subsurface drip irrigation and other alternative irrigation systems in western Kansas to sustain irrigated corn production to support the beef feedlot industry. The project also supports an educational effort through collection and dissemination of information on efficient irrigation methods. The project has a significant and active technology transfer and extension program. In 1996 alone, one paper was given at an international conference, three refereed journal articles were submitted, two extension publications were published, and ten other miscellaneous presentations and publications were made. The computer program Irrigation Economics Evaluation System is complete and will be distributed by the Kansas State University Cooperative Extension Service in 1997.

The work supported by this grant began in fiscal year 1993 with an appropriation of \$94,000; \$88,000 in fiscal year 1994; and \$79,000 in fiscal years 1995–1997 each year. The total funds appropriated are \$419,000.

The non-federal funds and sources provided for this grant were as follows: \$781,232 state appropriations, \$55,205 product sales, \$60,907 industry and miscellaneous in 1991; \$863,408 state appropriations, \$37,543 product sales, \$35,484 industry and miscellaneous in 1992; \$833,324 state appropriations, \$54,964 product sales, \$144,225 industry and miscellaneous in 1993. Amounts for other fiscal years are not available.

The research is being conducted at Kansas State University. The field portion of the research is being conducted on Research Centers at Colby and Garden City, Kansas. Additional work is being carried out on campus at the Departments of Agronomy and Agricultural Economics in Manhattan, Kansas. The original anticipated completion date for the project was May 31, 1998, following the funding in fiscal year 1997. The original objectives of the project appear to be on track for completion by that date. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

The project has been peer reviewed. The reviewers felt the project concept to be valid and the timetable for accomplishments to be on target. The research as outlined in the proposal is within the mission of the Agricultural Experiment Station and is a high priority to Kansas agriculture.

WATER MANAGEMENT, ALABAMA

The program components of the Water Management, Alabama project include: renovation as a water quality enhancement practice for pastures fertilized with poultry waste, the efficacy of a new biocidal polymer water filter against *Cryptosporidium* oocysts and *Giardia* cysts, improving effluent quality of the in-pond raceway fish culture system through removal and infiltration of fish wastes, relationships between landscape characteristics and nonpoint pollution inputs to coastal estuaries, and resource management for enhancement of environmental quality as conservation reserve program contracts expire in the Alabama Black Belt.

The principal researchers believe that perennial pastureland is the most common disposal area for waste collected from confined animal operations in the humid Southeast. This is especially true in broiler chicken production areas such as Alabama, where litter is generated, since this material can be used as both fertilizer and feed in associated cattle operations. Most broiler production in this region is highly concentrated where topography and soil fertility limit row crop production. Although application of high rates of poultry wastes to perennial pastures in these areas has the potential to cause environmental pollution, operators have few alternatives to land application. This research provides solutions and/or potential recommendations for utilization of broiler litter in the best manner to protect water from both nitrogen and phosphorous application. With the considerable acreage that is coming off the Conservation Reserve Program, this research will give guidance to landowners and government agencies in the best use for the land. Published guideline handbooks have been distributed and the researchers believe they are providing much assistance to landowners, county agents, Natural Resources Conservation Service personnel, and others in applying best management practices.

The potential for Geographic Information Systems to be major tools for determining the best use for land so as to protect the environment will be enhanced because of this study. Entire watersheds can be protected as landowners, land use planners and government entities make decisions for the future. The data provided by this study are particularly important in light of proposed revisions to the Coastal Zone Management Act. Given concerns regarding land use activity in the coastal zones, these data may provide indications of which combinations of land use and land forms may be problematic in terms of water quality. In view of significant needs for research in high priority national interest topics, such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At

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the discretion of the state, Hatch Act or other funding could be used to support this research.

This is a new grant, however, water quality work has been ongoing in Alabama in recent years. This previous research will be used to strengthen and backdrop work for this grant. Previous research has shown the relationships between cattle foot traffic, forage canopy, ground cover, root biomass, and nutrient uptake for grazed versus hayed tall fescue following two renovation tillage treatments. As a followup to this research, 25 Conservation Reserve Programs were surveyed. This included 300 sampling points, each covering 300 acres. Instrumentation was installed on several of the properties for measurement of soil erodability. Non-point source pollution in streams is being examined using the Geographic Information System and Remote Sensing analysis tools to assess the relationships between land use complex and water quality. Lands within each sub-watershed were classified according to their use, and the location of forested land use relative to the stream channel was noted. A linkage model was developed which relates land use/land cover with non-point source pollution.

The work supported by this grant begins in fiscal year 1997 and the appropriation for fiscal year 1997 is \$170,000. The non-federal funds and sources provided for this grant for fiscal year 1996 are as follows: \$894,344 state appropriations; and \$572,342 miscellaneous. It is anticipated that the University will more than match federal funds for this grant with state appropriations and miscellaneous non-federal funds in fiscal year 1997.

This work is being conducted at the Auburn University Main Campus, and at the Upper Coastal Plain Substation at Winfield, Alabama, the Tennessee Valley Substation at Belle Mina, Alabama, the Black Belt Substation at Marion Junction, Alabama, the Sand Mountain Substation at Crossville, Alabama, and on private forest land near Greenville, Alabama. It is anticipated that the completion date of the project will be August 31, 1998, even though selected objectives will be met sooner. Work is proceeding on all objectives and some of them have already been met. Some objectives will be completed at the end of summer 1997 and others will continue through August 31, 1998. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

The Program Manager from the Cooperative State Research, Education, and Extension Service reviewed and evaluated the proposed research prior to the award of the grant, and reviewed and evaluated the annual progress reports from the Principal Investigator, following internal review by the University. Annual progress reports are due to be submitted by the individual research investigators to the University on March 1, 1997, after which a University evaluation will be made on each segment with the project leaders and department heads during March and April 1997, prior to submission to the Cooperative State Research, Education and Extension Service for review and approval.

WATER QUALITY

The Cooperative State Research, Education, and Extension Service (CSREES) continues support of this national, competitively-awarded grants program as part of USDA's Water Quality Initiative. The program supports research to investigate the impacts of non-point source pollution from agriculture on water quality and to develop improved, sustainable agricultural practices and systems that protect the environment and are economically profitable. Also, this program supports research on five Management Systems Evaluation Area (MSEA) projects as part of the Midwest Initiative on Water Quality to develop new farming systems that protect water quality, with research located at 10 sites throughout the Corn Belt. This program is conducted jointly with the State Agricultural Experiment Stations, USDA's Agricultural Research Service and Natural Resources Conservation Service, the U.S. Environmental Protection Agency, the U.S. Geological Survey, extension specialists, and other Federal, State, and local agencies. The water quality grants have supported more than 300 research projects across the country. In fiscal years 1996 and 1997, funds were awarded to the five MSEA projects in the Midwest to continue the water quality systems research started in 1990. In 1996, new projects were initiated as Agricultural Systems for Environmental Quality. The new projects focus on watershed-scale agriculture production systems that reduce pollution of soil and water while maintaining productivity and profitability. Concerns have been raised by the public about the possible risks to the environment and soil and water quality resulting from the use of agricultural chemicals. Better methods detection of minor amounts of chemicals in water have made the public, farmers, and policy-makers more concerned about the use and management of these agricultural chemicals and wastes, while meeting the challenge of maintaining the efficiency and productivity

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of agricultural production systems. Water quality continues to be of high priority at local, regional, and national levels. Results from the research are providing technologies to reduce pollutants, guidelines for site-specific farming, and improved farming systems.

The original goals of the program were to determine the extent to which agriculture has impacted ground water quality, and to develop new, improved, cost effective agricultural systems that enhance ground water quality. During the past three years, focus and allocation on resources have increased for surface water quality. Major progress has already been made on these goals. Examples of some of the results of recently completed research include the following:

1. Nitrogen continues to be of concern as a pollutant in our Nation's waters. The rapid expansion of the Hypoxic zone in the Gulf of Mexico in 1993 has focused additional attention on nitrates coming from several sources, including agriculture. Nitrogen testing research and implementation of the Pre-sidedress Nitrogen Test in the Northeast and Midwest is helping producers match the supply and demand for nitrogen, thus reducing excess application.

2. Crop rotations can significantly reduce nitrate pollution. In the Pacific Northwest, nitrate lost from the root zone of irrigated potatoes can be effectively recaptured by following with a grain or forage crop.

3. The Management System Evaluation Area modeling group has adapted, improved, and verified the usefulness of the Root Zone Water Quality Model as a tool for extending MSEA results beyond the research sites. The model predicts the movement of water and agricultural chemicals.

The work under the Water Quality Program began in fiscal year 1990 with an appropriation of \$6,615,000. The subsequent appropriations were as follows: \$8,000,000 in fiscal year 1991; \$9,000,000 in fiscal year 1992; \$8,950,000 in fiscal year 1993; \$4,230,000 in fiscal year 1994; and \$2,757,000 in fiscal years 1995 through 1997. A total of \$45,066,000 has been appropriated for the Special Research Grants Water Quality Program. The non-federal funds in support of the Water Quality Program, provided by state appropriations, industry, product sales, and other local sources, have averaged approximately \$1,000,000 annually since the program began in 1990.

Funds provided under the Water Quality Program have been awarded to institutions in virtually every state, so work is being carried out in all parts of the country. The MSEA projects of the Midwest Initiative on Water Quality are headquartered in Iowa, Minnesota, Missouri, Nebraska, and Ohio, with satellite locations in North Dakota, South Dakota, and Wisconsin. Three new projects located in Indiana, North Carolina, and Ohio were initiated in fiscal year 1995. The original goals of the USDA Water Quality Research Plan were to: (1) assess the seriousness and extent of agriculture's impact on ground water quality, and (2) develop new and improved agricultural systems that are cost effective and enhance ground water quality. The original project was developed for five years with the expectation that it would be reviewed and possibly extended beyond the five year period if warranted. The 1995 review of the program identified a need for increased attention to surface water quality problems. The research funded under the Special Research Grants Program has produced significant progress in understanding the impacts of agricultural practices on surface and ground water pollution, and in developing improved agricultural systems that are economically and environmentally sustainable. Implementation of some of these improved agricultural systems is already underway in a number of states. The focus over the next five years will be on developing and implementing agricultural systems that utilize the results of research funded under this program. The March 1995 Water Quality Users Conference brought together research findings and new technologies that have been developed.

An external review team evaluated the Management System Evaluation Areas and associated component projects. All MSEA projects have an impressive record of successfully implemented interdisciplinary teams to study water quality problems. Credibility and confidence in experimental data has been assured by implementation of quality assessment/quality control procedures, and a diversified delivery system/educational outreach effort will be a necessary key component of MSEA success.

WEED CONTROL, NORTH DAKOTA

The project is designed to reduce the environmental pollution caused by the extensive usage of herbicides for weed control and provide growers with environmentally safe weed control systems. The present project addresses three areas; one being crop production practices, second, weed biology and herbicide resistance, and third, efficient herbicide usage. In crop production practices, systems experiments have been established at three locations that include crop rotation, tillage, seeding method and

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timing; these variables are incorporated into sustainable, reduced tillage and conventional systems. Results being monitored include the effect of weed control intensity on long-term weed infestations and economic returns. The emphasis in weed biology research is with kochia, wild oat, and green foxtail that are herbicide resistant. In efficient herbicide usage, several factors are being studied such as application methods to improve weed retention of herbicides and weed-detecting sprayers to treat only areas where weeds are present. The research addresses new methods to control weeds using systems control with multi-year, multi-crop rotations, reduced pesticide applications, that better simulate a typical on-farm sequence than short-term grants. Some variables included in the research are reduced pesticide applications and techniques to enhance herbicide efficacy. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research.

The original goal was to develop new, efficient weed control methods. To accomplish this, long-term field experiments have been initiated to obtain basic crop-weed biology and production system information. The first three years of the rotation experiments have been completed in 1993 through 1995. Changes in weed populations were beginning to occur in 1995 and the environmental conditions were atypically wet during these three years; these observations support the need to complete at least two cycles of the rotation for a total of at least eight years to obtain reliable scientific information. The improved efficiency of weed control method has developed adjuvants to overcome the antagonism of salts, which naturally occur in water and reduce the efficacy of some herbicides. Another approach is adjuvants to reduce the herbicide rate required and/or to improve their performance consistency. Kochia genetic lines have been developed that are homozygous for resistance to various studies to determine inheritance and possible spread of herbicide resistance. Fields are being monitored for the development of kochia resistance to dicamba. A better understanding of how herbicide-resistant weeds occur in a population should be useful to developing methods to prevent herbicide resistance from becoming an unmanageable problem.

The work supported by this grant began in fiscal year 1992 and the appropriation for fiscal years 1992 and 1993 was \$500,000 per year; \$470,000 in fiscal year 1994; and \$423,000 in fiscal years 1995 through 1997. A total of \$2,739,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: no matching in 1991; \$27,030 state appropriations in 1992, \$48,472 state appropriations in 1993, \$41,969 state appropriations in 1994, \$71,847 state appropriations in 1995, and an estimated \$70,000 state appropriation in 1996.

Research is being conducted at North Dakota State University. The original anticipated completion date was a minimum of 5 years, with an additional 5 years currently being projected. The original objectives have been satisfactorily met, but the research with biological traits of herbicide-resistant weeds require more time, depending upon whether the traits prove to be simply inherited or involve multiple genes with a complex inheritance. The anticipated completion date of the additional and related objectives is 2001. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

Each year the grant is peer reviewed and reviewed by CSREES's senior scientific staff. A summary of that review indicated excellent progress in the achieving the objectives.

WHEAT GENETICS, KANSAS

This project provides partial support for the Wheat Genetics Resource Center at the University of Kansas, which focuses on collection, evaluation, maintenance and distribution of exotic wheat related germplasm needed to develop new wheat cultivar resistant to disease, insects, and environmental stress. The principal researcher believes most cultivated varieties of wheat are derived from common sources. They lack the rich genetic diversity needed to develop resistance to diseases, insects and environmental stress. The replacement of genetically rich primitive cultivar and land races by modern, more uniform cultivars all over the world is causing erosion of wheat germplasm resources. New pests or those that have overcome varietal resistance pose a constant threat to the nations wheat production. Genetic resistance often resides in wild relatives of wheat. The researchers believe this program, which was established in Kansas, is providing service to wheat breeders nationwide. In view of significant needs for research in high priority national

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interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research. The original goal of this research was to enhance the genetic diversity available to wheat breeders nationally and internationally by collecting, evaluating, maintaining and distributing germplasm derived from wild relatives of wheat. To date 25 germplasm releases have been made containing new genes for resistance to such pests as Hessian fly, greenbug, leaf rust, soilborne mosaic virus and Russian wheat aphid. Germplasm stocks with resistance to leaf rust and powdery mildew are under development. Evaluation of germplasm for important resistance genes was carried out by Center scientists and cooperating institutions. The Center filled 30 requests from U.S. wheat breeders for seed from the germplasm collection and 57 requests for seed of germplasm releases, as well as large numbers from international breeders.

Work supported by this grant began in fiscal year 1989. Appropriations were for fiscal year 1989, \$100,000; fiscal year 1990, \$99,000; fiscal year 1991, \$149,000; fiscal years 1992-1993, \$159,000 per year; fiscal year 1994, \$196,000; and fiscal years 1995-1997, \$176,000 each year. A total of \$1,390,000 has been appropriated.

The nonfederal funds provided for this grant were as follows: \$493,285 state appropriations, \$31,414 product sales, and \$84,610, other non-federal in 1991; \$414,822 state appropriations, \$14,259 product sales, and \$102,086 other non-federal in 1992; and \$533,848 state appropriations, \$32,297 product sales, and \$163,937 non-federal in 1993, \$468,960 in 1994; \$563,671, non-federal funding for 1995 and \$457,840 of non-federal support for 1996.

This research is being conducted at Kansas State University by the Wheat Genetics Resource Center. The collection, evaluation and enhancement of Wheat germplasm is continual process. Therefore this project does not have a defined completion date. The principal researcher anticipates continuing the work for an indefinite period of time. In keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

This Special Grant has not been subjected to a comprehensive review. However each annual proposal is peer reviewed at the institution and reviewed by CSREES scientists.

WOOD UTILIZATION RESEARCH

The new wood utilization knowledge and technologies discovered help maintain a vigorous, competitive, domestic forest industry. This, in turn, helps achieve sustainable forests since improved utilization extends timber supplies. The research includes: meeting environmental objectives in timber harvesting and forest products manufacture; extending the timber resource through research, including management; exploiting pesticides developed from forest trees; wood machining; introducing small forest products industries to wood technology; and developing new products from wood and recycled materials. Research at four of the centers improves the utilization of those forest species that grow in these regions, i.e. western conifers, southern pines, Lake States hardwoods, and northeastern forests. The other two centers conduct research in specific subdisciplines, i.e. machining of wood and incubator technology transfer. The wood machining work at North Carolina State University improves wood machining. Wood industry incubator work in Duluth, Minnesota, contributes to rural development of local economies. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Special Research Grant. At the discretion of the State, Hatch Act or other formula funding could be used to support this research.

The original goal was to generate new knowledge that would benefit the forest industry. This goal has been fine-tuned to place additional emphasis on environmental stewardship, resource extension, technology transfer, and scientist education. Research that extends the resource benefits forest ecosystems and increases the competitiveness of the forest products industry. In addition, the principal researchers believe consumers benefit from the more efficient production. For example, quality control procedures have saved \$200,000 per year in one mill and \$300,000 per year in a second through reduced waste. The researchers estimate that handheld calculator programs developed by this research have resulted in savings of nearly \$1,000,000 to woodworkers. Research has reduced the cost of cleanup of superfund sites by tenfold due to the use of biodeterioration technology. Water quality is believed to have been improved due to the introduction of bacteria that consume polychlorinated phenols in contaminated water sources. Laser cutting of wood holds potential for high savings in raw materials. Systems analysis of sawmill operations has allowed managers to improve the efficiencies of operation. Improve-

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ments in membrane pressing of cabinet doors has improved production and product quality. The research developed an electric wood defect deterioration system to improve automated production systems. These are a few examples of the benefits from continuing research in wood utilization. Each of these centers has an advisory committee that establishes priorities and peer reviews research proposals.

Grants have been awarded from funds appropriated as follows: fiscal year 1985, \$3,000,000; fiscal years 1986 through 1989, \$2,852,000 per year; fiscal year 1990, \$2,816,000; fiscal years 1991 and 1992, \$2,852,000 per year; fiscal year 1993, \$4,153,000; fiscal year 1994, \$4,176,000; fiscal year 1995–1996, \$3,758,000 per year; and \$3,536,000 in fiscal year 1997. A total of \$42,309,000 has been appropriated.

Mississippi State University non-federal funds were: State appropriations \$2,498,800, \$2,178,725, \$2,353,225, and \$2,331,691, \$2,650,230, and \$2,778,535 for 1991, 1992, 1993, 1994, 1995, and 1996, respectively. In addition, industrial funds averaged \$553,700 for those 4 years in support of the Mississippi Forest Products Laboratory. Oregon State University state appropriations were: \$1,337,962, \$1,394,304, \$1,256,750, \$1,252,750, 1,417,755, and \$1,117,000 for 1991, 1992, 1993, 1994, 1995, and 1996, respectively. Estimated non-public support averages \$500,000 per year. Michigan State University non-federal contributions for 1994 totaled \$910,481. Three new locations were added in 1994: University of Minnesota-Duluth non-federal match was \$590,000, \$550,000, and \$560,000 for 1994, 1995, and 1996. North Carolina State University was \$126,000, \$165,000, and \$135,000 for 1994, 1995, and 1996. University of Maine was \$600,000, \$445,723, and \$459,100 for 1994, 1995, and 1996.

There are six locations. The initial three—Oregon State University, Mississippi State University, and Michigan State University—were joined by the University of Minnesota-Duluth, North Carolina State University, and the University of Maine in fiscal year 1994. The original objective was to build and maintain strong regional centers of wood utilization research to address the Nation's needs for wood products through strengthening university wood products research and graduate education. These centers have been established, and wood utilization improves each year as a result. Projects begun in 1997 will be completed by 2001. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

Progress reports from the six centers are reviewed yearly or more frequently. Center directors last met together in June 1996. Centers all have advisory committees which meet periodically. The U.S. Department of Agriculture conducts informal on-site reviews periodically. The Duluth and Oregon sites were visited in 1996. A Departmental panel reviewed the original three centers in 1992 and 1993. At that time, the original objectives were broadened. The centers have responded to the review recommendations by increasing their focus on meeting environmental objectives by conducting research leading to sustained timber production; extending the timber supply through improved processing; developing new structural applications for wood; and developing wood extractives to substitute for pesticides, preservatives, and adhesives.

WOOL RESEARCH

The overall goals for this research are the development of objective measures of wool, mohair, cashmere and other animal fibers to increase profitability of the sheep and Angora goat industries. Specific objectives include: develop and evaluate measurement techniques for rapid objective evaluation of wool, mohair, cashmere and other animal fibers; increase the use of objective measurements to increase fiber production, quality and income to producers, and increase consumer acceptance of wool fabrics. The fiscal year 1996 grants terminate between January 1997 and April 1998. The 1997 grant proposals have been received and are being reviewed. Collaboration exists among researchers in Texas, Wyoming, and Montana associated with this grant and other Federal, university, and industry scientists on a wide basis to assure responsiveness to the needs of those involved in wool and mohair production, marketing, and processing. In view of significant needs for research in areas that are high priority nationally, no further funding is proposed for this project. At the discretion of the State, Hatch Act of other funding could be used to support this effort.

The overall goal for this research to develop objective measures of wool, mohair, cashmere and other animal fibers to increase profitability of the sheep and Angora goat industries remains the primary emphasis of the research. Computer software programs for the automatic image analysis system are being evaluated and improved for the purpose of measuring the average diameter and distribution of animal fibers. Software is also being modified to permit rapid, accurate measurement

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of other fiber properties such as fiber style crimp and character. Near infrared reflectance analysis was compared to standard practices for yield measurement of mohair. Progress was again made to improve the quantity and quality of fibers produced from sheep and goats. Selection and crossbreeding experiments, part of a national study, were conducted to evaluate wool characteristics, reproduction, and lamb quantity and quality of crosses between Merino and Rambouillet breeds. Correlation studies were completed to compare the measurements made by the laser scan image analyzer with those made by microprojection. Numerous scientific and technical papers were published during the past year.

Grants have been awarded from appropriated funds in the amount of \$150,000 for fiscal years 1984–1985; \$142,000 per year for fiscal years 1986–1989; \$144,000 for fiscal year 1990; \$198,000 for fiscal year 1991; and \$250,000 per year for fiscal year 1992–1993; fiscal year 1994, \$235,000; and fiscal years 1995–1997, \$212,000 each year. A total of \$2,581,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$150,913 state appropriations, \$11,800 product sales, \$5,817 industry, and \$3,556 miscellaneous in 1991; \$111,394 state appropriations, \$25,451 product sales, \$41,442 industry, \$3,068 miscellaneous in 1992; and \$152,699 state appropriations, \$39,443 product sales, \$40,804 industry and \$3,556 miscellaneous in 1993; \$150,094 state appropriations, \$35,284 product sale, \$36,484 industry and \$3,556 miscellaneous in 1994; and \$67,345 state appropriations, \$10,000 product sales; \$34,325 industry contributions in 1995; and \$39,033 non-federal support in 1996.

The research is in progress at the Texas A&M University, Texas Agricultural Experiment Station, the University of Wyoming and Montana State University. The original objectives to improve the efficiency and profitability of wool, mohair and cashmere production and marketing are still valid. Specific objectives for individual laboratories and experiments are continually revised to reflect the changing priorities for the wool and mohair industries and consumers. It is anticipated that five years will be required to complete the current research. Keeping with the Administration's policy of awarding research grants competitively, no further federal funding for this grant is requested.

The principal investigators from the three institutions meet annually to evaluate progress and prioritize research according to industry needs. The research for this Special Grant is a component of a regional research project which entails coordination by the agency, reporting of accomplishments annually, and overall project peer review every three years. Last year the regional research project was reviewed and approved for renewal. Annually, Special Grant proposals are submitted to the agency for review and approval. The design and procedures in the most recent proposal were deemed to be adequate to supply the data necessary to fulfill the objectives. Excellent facilities and equipment are available to provide scientists with complete fleece analyses for objective measurements of wool and mohair. The investigators are able to conduct unique experiments as a result of the very specialized instrumentation available for the project. The agency representative periodically visits the research facilities and reviews progress, the most recent in May of 1994. It was concluded that the research was addressing the priorities of the U.S. wool and mohair industry, contributing to the introduction of value-based marketing systems, assisting in the establishment of a nucleus for U.S. cashmere production, and being effectively coordinated with other research laboratories. Research results are annually reported to the industry and the agency providing the means for adoption of new practices to improve the marketing of wool and mohair.

AGRICULTURAL DEVELOPMENT IN THE AMERICAN PACIFIC

The Agricultural Development in the American Pacific (ADAP) project allows the Land Grant research, extension, and instruction programs of the five participating institutions—American Samoa Community College, College of Micronesia, Northern Marianas College, University of Guam and University of Hawaii—to collaborate and cooperate to enhance their impact on agriculture and communities. ADAP is a mechanism to address common regional client-based issues while maintaining cultural, rural, economic and environmental integrity. When American Samoa assumes the Chair of ADAP in 1997, it will be the first time in the program's ten-year history that ADAP will be lead by an institution other than Hawaii. Detailed preparations are underway for a formal review by CSREES in July 1997. The five institutions have nearly completed the required review document and have formed three categories for future priorities: sustainable systems, collaboration/partnerships, and communication systems. ADAP Deans/Directors will use this review as input to formulating a new strategic plan articulated by and for the American Pacific. The principal researcher believes the five participating institutions are geographically dis-

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persed yet facing many similar issues which can best be served through extensive networking and communication. ADAP facilitates communications and seeks to raise levels of academic achievement and improve the quality of education. In addition to a capacity building degree studies program for bachelors, masters and doctoral students, ADAP in 1996 opened a new area in faculty/staff development to improve institutional capability and credibility. For 1997, each ADAP institution will self-determine their best means for electronic communications and an independent assessment of overall electronic communication needs will be conducted. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this grant. At the discretion of the state, Hatch Act or other funds could be used to support this research.

ADAP's original goals are embodied in the 1992 strategic plan, namely to develop human resources within the institutions, to more effectively manage agricultural programs within and among the institutions, and to focus resources available on ADAP mission needs. Priority projects for 1997 include: animal health survey, livestock waste management, dietary guidelines for Pacific foods, artificial insemination demonstration/education, youth-at-risk assessment, and market information collaboration with "state" Departments of Agriculture.

This work has been underway for seven years with an annual appropriation of \$650,000 to the former Extension Service. In fiscal year 1994, an appropriation of \$608,000 was made to CSREES to continue the ADAP program. The fiscal year 1995 appropriation was \$544,000, and fiscal year 1996 and 1997 were \$564,000 each year. The appropriation total to CSREES is \$2,210,000. Non-federal funds are not provided. Unspecified in-kind support, such as facilities, equipment and administrative support, are provided by each institution and, in some specific projects, by non-ADAP collaborating institutions.

This work is being carried out by American Samoa Community College, College of Micronesia, Northern Marianas College, University of Guam, and the University of Hawaii. The ADAP program has been gradually achieving original program objectives, particularly in the areas of improvement in institutional capacity and communications. The 1997 formal review by CSREES will evaluate achievement of the objectives of the 1992 strategic plan. It is anticipated that an additional 5 to 10 years will be needed to fully achieve collaborative integration of the American Pacific land grant programs. In keeping with the Administration's policy to award grants competitively, no further federal funding for this grant is requested. Research could be continued at the state's or territory's discretion using formula or other funds.

The ADAP program was last evaluated by a review team in 1992 which prepared a 5 year strategic plan. That strategic plan has guided the ADAP mission and activities, including the call for the forthcoming formal program review.

ALTERNATIVE FUELS CHARACTERIZATION LABORATORY

The principal researchers believe these research and information dissemination activities have advanced the utilization of ethanol-based and other alternative fuels. They believe they have resolved issues affecting the use of ethanol in conventional and reformulated gasolines. The research addressed evaporative emissions from fuels, performance of vapor control sorbents, the environmental effects of ethanol fuels, and developing an ethanol-based fuel for piston engine aircraft. Dissemination involved promoting ethanol fuels in the Red River Valley. The researchers believe the need is to ensure the availability of unbiased scientific data to ensure that renewable fuels are represented accurately in the marketplace. The project is developing partnerships with public and private sectors in advancing cleaner burning fuels technology. Fuels from renewable resources will reduce U.S. dependence on overseas petroleum, while providing cash crops for farmers. Renewable fuels are essential to energy and economic sustainability, benefiting people, communities, and the Nation. In view of significant needs for research in high priority, national interest topics such as improved pest management systems, funds are not proposed to continue this grant. At the discretion of the State, other funding could be used to support this research. One goal is to compare alternative fuels to conventional fuels, and promote alternative fuels through the international Red River Valley Clean Cities Coalition. Another goal is to provide consumers with information regarding the efficiencies of the broad range of fuels, and provide information on conversion of agricultural materials and other biomass materials to alternative fuels. The program was instrumental in building North Dakota's first public ethanol fueling site and in solving cold-start problems.

The work supported in part by this grant began in fiscal year 1991. The appropriations for fiscal years 1991 through 1993 were \$250,000 per year, \$235,000 in

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fiscal year 1994, \$204,000 in fiscal year 1995, and \$218,000 in fiscal year 1996 and 1997. A total of \$1,625,000 has been appropriated.

Over the duration of the grant, about \$845,000 in non-federal funding has been allocated toward performance of grant objectives. For fiscal year 1996, non-federal funding was \$105,000. In fiscal year 1995, it was \$50,000. In fiscal year 1994, it was \$60,000. In fiscal years 1991 to 1993, non-federal funding was \$630,000, which included \$600,000 from the Illinois State Geological Survey to evaluate an ethanol-based process for coal desulfurization.

The University of North Dakota, Grand Forks, is the site of the Energy and Environmental Research Center, a major research laboratory employing over 250 scientists and technicians. The anticipated completion date for the original objectives of the project was April 30, 1992. This research has been completed, and its results have been published. In 1995, the scope and collaborative abilities of this program were expanded to include the Red River Valley Clean Cities program and collaborative efforts with industry and economic development partners. Most of the research and dissemination activities now underway could be completed by 2001. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding is requested for this project.

The last agency on-site evaluation was conducted in July 1996 by the U.S. Department of Agriculture. The program was given a very favorable review based on its ability to forge partnerships with both regional and national public and private organizations committed to commercial development of alternative fuels, its ability to disseminate research results to an international technical audience, and its ability to provide up-to-date research and unbiased information in response to scientific needs, regulatory demands, and public requests.

CENTER FOR AGRICULTURE AND RURAL DEVELOPMENT

The research provides current economic information on international trade in agriculture and analyses of the implications of trade policy alternatives on the agricultural sector of the United States and other countries. According to the proposal, trade negotiations and agreements are of national concern to policymakers, farmers, and agribusiness industries because of the implications for maintaining or opening markets and establishing terms of trade and prices. Typical agreements are extremely complex, requiring analysis by specialists to determine outcomes and to provide objective and accurate information to those impacted by such agreements. However, in view of significant needs for research in other high priority national interest topics such as improved pest management systems, funds are not proposed to continue this grant. At the discretion of the State, Hatch Act or other formula funding could be used to support this research.

The original goal was to assess and evaluate various proposals affecting agricultural trade to provide analytical support to the Office of the U.S. Trade Representative, and to provide information to farmers and agribusiness firms on the competitive implications of such agreements. An extensive number of theoretical studies and empirical and descriptive analyses of policy issues and technical problems pertaining to the Uruguay Round of negotiations were used by negotiators and the agribusiness community. Studies included the development of international trade models and assessments of trade options for meat, dairy, feed and cereal grains, oilseeds, and other commodities; impacts of the agreement upon selected countries; and reforms needed for compliance. Analyses included determination of the value and implications of export subsidies, import protection, and internal support mechanism and levels. Knowledge developed in this phase is now being used to monitor the effects of Uruguay Round implementation and the differential impacts for developed, developing and transitional economies. This grant supports six projects focusing on General Agreement on Tariffs and Trade for Eastern Europe, Baltic and the Newly Independent States; development of a model to assess the North American Free Trade Agreement and its linkages with the General Agreement on Tariffs and Trade; trade implications of U.S. food and development aid in developing countries; integration of China into world agricultural markets; and special projects as requested for the U.S. Trade Representative's office.

This research program was initiated in fiscal year 1989. Grants have been awarded from funds appropriated as follows: fiscal year 1989, \$750,000; fiscal years 1990 and 1991, \$741,000 per year; fiscal years 1992-1993, \$750,000 per year; fiscal year 1994, \$705,000; fiscal year 1995, \$612,000; fiscal year 1996, \$655,000 and fiscal year 1997, \$355,000. A total of \$6,059,000 has been appropriated.

The non-federal funds and sources provided for this grant are as follows: \$111,210 State appropriations and \$175,616 miscellaneous for a total of \$286,826 in fiscal year 1991; \$113,779 State appropriations and \$173,117 miscellaneous for a total of

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\$286,896 in fiscal year 1992; \$120,138 State appropriations and \$164,707 miscellaneous for a total of \$284,845 in fiscal year 1993; \$161,673 State appropriations and \$32,000 miscellaneous for a total of \$193,673 in fiscal year 1994; \$161,000 State and \$30,000 miscellaneous for a total of \$191,000 in fiscal year 1995; \$70,000 State appropriations and \$44,000 miscellaneous for a total of \$114,000 in fiscal year 1996. Fiscal year 1997 preliminary information indicates \$60,325 in State appropriations and information is not yet available on miscellaneous funds.

The research program is carried out by the Center for Agriculture and Rural Development at Iowa State University. The university researchers anticipate that the work should be completed in 1998 with analyses of the final agreement of the Uruguay Round and related trade agreements and dissemination of these results. Work covered by the most recent agreement would be completed by the end of 1998. However, in keeping with the Administration's policy of awarding research grants competitively, no further Federal funding is requested for this grant.

Evaluation of this project occurred as a part of the 1997 project review and approval process. We found that this project was useful in estimating impacts of the Uruguay Round provisions on world trade in important U.S. agricultural commodities.

CENTER FOR NORTH AMERICAN STUDIES, TEXAS

The purpose of this grant is to develop linkages with educational and other institutions in Mexico and Canada to share data and faculty, conduct research identifying trade opportunities and marketing problems, conduct policy analysis, and develop a broad range of training programs preparing agricultural/agribusiness firms for international marketing opportunities. The program director believes that citizens of the United States, Mexico and Canada have some similar concerns about the impact of the North American Free Trade Agreement (NAFTA), and that new, innovative approaches involving international cooperation are needed to assess and evaluate these issues. Research and training are needed to provide information to evaluate alternatives for expanding U.S. exports and resolving potential social, economic, and environmental conflicts. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this grant. At the discretion of the state, Hatch Act or other funding could be used to support this research.

The goal is to promote strong agricultural ties among the three North American countries, ensure the continued competitiveness of U.S. agriculture, and foster greater cooperation among the three countries in resolving critical agricultural issues of common interest. As a result of this project, cooperative study, research, policy analysis, and training programs have been developed and presented to U.S. producers and agribusiness managers, reaching over 2,600 people regarding trade opportunities in Mexico, impacts of expanded trade on selected agricultural sectors, and the procedures of international marketing. The Center recently co-sponsored the Tri-National Research Symposium, "NAFTA and Agriculture: Is the Experiment Working?" in San Antonio with 215 participants, of which 100 were from Mexico. The proceedings are available electronically through the Symposium Web page on the Internet. Research comparing the competitiveness of major agricultural production sectors is focused on Mexico's dairy, livestock, meat, feed grain, and fresh vegetable industries. Information databases on North American agriculture are being built to support the Center programs and are accessible on the Web. The electronic database on NAFTA and agriculture currently contains over 2,400 articles from major U.S., Canadian, and Mexican publications. A study of trans-boundary trade and environmental linkages found that existing institutions in both countries do not adequately address environmental losses or gains.

Work supported by this grant began in fiscal year 1994 with an appropriation of \$94,000; \$81,000 in fiscal year 1995; and \$87,000 in fiscal years 1996 and 1997. A total of \$349,000 has been appropriated. The non-federal funds and sources provided for this grant are as follows: \$39,000 State appropriations in fiscal year 1994 and \$54,000 in fiscal years 1995. The annual State contributions for fiscal years 1996 and 1997 exceed \$60,000.

The program is being carried out at Texas A&M University through the Texas Agricultural Experiment Station in collaboration with the Louisiana State University Agricultural Center, and other universities and agencies of the Texas A&M University System. The original proposal in 1994 was for a period of 12 months. The current phase of the program will be completed in the year 2000. In keeping with the Administration's policy of awarding research grants competitively, no further Federal funding is requested for this grant.

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CSREES performed a merit review of the project in August 1996 as it evaluated the project proposal for 1996 and concluded that progress on the four objectives was made and that a satisfactory plan of work had been planned for the next funding period. Linkages were made with counterparts at Mexican institutions and cooperative research projects are being planned. Similar linkages will be made with counterparts in Canada.

DATA INFORMATION SYSTEM QUESTIONS

Cooperative State Research, Education, and Extension Service (CSREES) is in the process of funding a cooperative agreement with the University of Arkansas to provide national leadership in coordinating the efforts of our university partners in helping us determine appropriate content for a Research, Education, and Economics Information System (REEIS)-wide information system. In addition, the University of Arkansas will provide essential services in managing and coordinating a national Steering Committee responsible for overseeing the overall design, development, testing, and implementation of REEIS. Similarly, funds have been allocated to employ a technical services manager and a program analyst to oversee contracting with outside sources to design and launch REEIS and to comply with the necessary clearances and regulations applicable to information technology systems. In addition, funds have been allocated to secure a temporary director through the Intergovernmental Personnel Act (IPA) to coordinate and guide the overall aspects of development, testing, and implementing REEIS. Remaining funds are being allocated for contracting with a private sector firm to conduct a strategic audit of available data and a national needs assessment.

USDA's Research, Education, and Economics (REE) mission agencies and their university partners lack a central, integrated, user-friendly electronic information system capable of providing a knowledge base of the thousands of programs and projects for which they are responsible that focus on food, agriculture, natural resources, and rural development. Such an information system is increasingly needed to enable the Department and its partners to readily conduct both comprehensive baseline and ongoing assessments as well as evaluations of research, education, extension, and economics programs and projects. In recent years, this need has become more urgent for several reasons. First, the United States needs a visionary public funded research and development program to produce essential knowledge and innovations for meeting growing competition in a global market—which is largely attributable to the expanding research and development efforts of foreign nations. Second, a comprehensive information system is needed to serve as a primary reference source for development of new research and education projects on such diverse issues as increasing productivity in agriculture and processing, improving the safety and quality of food, and enhancing the sustainability of the environment and rural communities. Third, Federal/State policy makers and administrators are requiring empirical analyses to account for historical, current, and future use of public funds and to provide a basis for redirecting funds to higher priority problems. Fourth, the Government Performance and Results Act (GPRA) has imposed reporting demands on program outcomes which current, decentralized information systems are not prepared to adequately satisfy.

The original goal of this initiative was to develop an information system that can provide real-time tracking of research, extension and education projects and programs; has the capability to communicate vertically between field, state and Federal locations; will enable the REE agencies and their partners to conduct rapid and comprehensive policy assessments and program evaluation analyses; facilitates assessment of technologies and practices employed in extension, education, economics and research activities at the field and/or regional levels; provides clear and transparent public access to relevant parts of the information; and provides information management tools to enhance the timeliness and accuracy of REE-wide responses to inquiries about program objectives and expenditures.

Congress first appropriated \$.4 million for REEIS in fiscal year 1997 to begin planning its design and development. We are in the process of establishing a National Steering Committee to provide advice and guidance throughout the development and implementation process. The Steering Committee will be chaired by a notable administrator of extension and research at a key land-grant university. It will be comprised of both users and producers of Research, Education, Economics agencies' data, including program officials and program leaders, information system managers from other Federal agencies, representatives from Federal oversight agencies, program/project leaders representing partner institutions, and private sector users of REE data. Ultimately, this body will be responsible for recommending work

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specifications and for assessing the quality of work performed by an experienced and successful private contractor specializing in public-sector information systems.

Leadership responsibility for REEIS resides within the Cooperative State Research, Education, and Extension Service's Science and Education Resources Development division. This provides for effective integration of the Current Research Information System, the Food and Agricultural Education Information System, and appropriate extension data bases. CSREES is working closely with all REE agencies and with the university system via a cooperative agreement with the University of Arkansas. We hope also to use the Intergovernmental Personnel Act to secure an IPA from another university to carry out REEIS essential management responsibilities. In addition, a process is underway to engage a private sector firm specializing in public-sector information systems to design, develop, test, and implement REEIS.

It is anticipated that REEIS can be operational by the year 2000. The current appropriation of \$400,000 will cover start-up costs such as establishment of a National Steering Committee, preparation and specifications for contracting with an outside firm, selection of a contractor, a needs assessment, identification of functional requirements, a draft plan for designing and developing the system including recommendations for in-house hardware, operating system, and software programs. The \$600,000 increase request for fiscal year 1998 will allow for implementing, testing, and refining a prototype, including preparation of an operations manual and a full-scale implementation and maintenance plan. The Research, Education, and Economics Information System meets a high priority national need for a continuing national information system. REEIS is being designed to meet the data information needs of all REE agencies and their university and private sector cooperators. It will link data systems on research, education, extension, and economics. Therefore, annual maintenance costs will be ongoing.

An evaluation of Research, Education, and Economics Information System is not appropriate at this early stage of development.

GEOGRAPHIC INFORMATION SYSTEM

The program is designed to transfer evolving geographic information systems technologies to state and local governments. This technology—and in particular—the related technologies including Internet access for information, data bases, and telecommunication for cooperative system development are sufficiently complicated that most of the people familiar enough with them to serve as effective transfer agents are researchers. The current program is being carried out by a non-profit corporation, The National Center for Resource Innovations whose directors and participants are the sub-contractors who are carrying out the program. These sub-contractors range over a wide spectrum of sizes and special areas of site based expertise involving different Departments in four academic institutions, one regional development authority and one non-profit corporation working on agro-environmental problems in the Chesapeake Bay. A new site at the University of New Mexico has been added by the Board this year. This unique institutional arrangement has helped fill a unique role in linking some of the otherwise balkanized efforts of agencies and academic institutions and now seven regions of the country.

The principal researcher believes few national programs have impact without translation to the local environment, including either regional, state, or local government level. Much progress has been made in developing computer based information systems ranging from data on transportation systems to the quantity of a resource. Given a geographic dimension, these information systems provide an invaluable vehicle for sharing information over the various levels of government and even facilitate the integration of disparate data. The work of this project is needed to transfer this technology to state and local governments whose limited training budgets and sometimes isolated location make it difficult to use the latest technology. The technology developed in this program is useful in improving the management of our natural resources. While concentrating on issues related to agriculture, the independent, non-profit nature of the National Center for Resource Innovations facilitates linkages across disciplinary and institutional barriers, make it possible to use work at the state and local levels which was initiated at the Federal level. While the early phases of GIS concentrated on building information systems related to rural physical and natural resources, the current challenge is to integrate human economic, social and demographic information to better understand the relationship of human communities to the landscape. There is a need for this to better understand the technology consumer. In addition, there is a need for integrated information about other biological systems including insects, plants, and animals as we extend our work to include whole farm management within an ecosystem-based environment.

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In this context, newer high capacity technologies are also beginning to provide other dimensions—those of high level time related phenomena, including weather-associated transport of biological materials and their relationship to food producing systems. CSREES has funded seminal research in integrated pest and animal management in the 1970's and 1980's. At the other end of the spatial scale, the role of the public sector in geographic information system based precision farming technologies, data capture, and information synthesis as the subject of a current study group. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this grant. At the discretion of the State, Hatch Act or other funds could be used to support this research.

The original goal of this work was to serve as a pilot project for the transfer of geographic information systems technology to local governments as related to natural resources. It has carried out this function in a useful way. With impetus from this project and similar efforts economic and biological data are being presented in maps fashion useful to state and local governments and individuals. This project has provided the impetus and linkages to facilitate planning work done in South Georgia with some assistance given to local tax assessment and parcel identification by a Department of Commerce sponsored Economic Development Authority. The Chesapeake Bay project has linked seven state conservation entities in an effort to develop better watershed models and decision support systems. The Arkansas portion of the project has focused on training to educate county employees with regard to the technology of geographic information systems and geographic positioning systems. The University of Wisconsin has continued to simultaneously support the high technology end of the evolution of new tools and seek new ways to implement change while measuring the impact of such implementation. The work in North Dakota has continued to focus on geographically referenced real time weather information for payments and others. And, in the smallest of the efforts under this program, the efforts at Central Washington have provided training for a number of State personnel and others from various levels and institutions on how to utilize geographic information systems. It is anticipated that the fiscal year 1997 grant will support work under this program through March 1998. The proposal for this work in 1996 has been received and reviewed.

Grants have been awarded from funds appropriated as follows: fiscal year 1990, \$494,000; fiscal year 1991, \$747,000; fiscal years 1992 and 1993, \$1,000,000 per year; fiscal year 1994, \$1,011,000; fiscal year 1995, \$877,000; fiscal year 1996, \$939,000; and fiscal year 1997, \$844,000. A total of \$6,912,000 has been appropriated.

For fiscal year 1990 through fiscal year 1996, to date, the work in this program had \$4,553,252 in non-federal support. In fiscal year 1990 non-federal support was \$714,940 consisting of equipment, data bases, and other miscellaneous contributions from foundations, city, and state governments. In fiscal year 1991 non-federal support was \$25,000 from county government. In fiscal year 1992 non-federal support was \$366,016 from county government, computer companies, and state governments consisting of equipment, software, facilities, and miscellaneous support. In fiscal year 1993, non-Federal support was \$713,900 consisting of financial and miscellaneous support from foundations, county and state governments. In fiscal year 1994, the non-Federal support was \$713,643. In fiscal year 1995 the non-Federal support was \$987,000. In fiscal year 1996 it was \$567,173. It is anticipated to be \$456,582 in fiscal year 1997.

The National Center for Resource Innovation Chesapeake Bay is located in Rosslyn, Virginia. This group is working under a memorandum of understanding with several states of the Chesapeake Bay watershed project. The southeastern center, in Valdosta, Georgia, in affiliation with the South Georgia Regional Development Center, has developed a comprehensive plan for the City of Adel as a model for other urban centers in their ten-county region. The southwestern center, in Fayetteville, Arkansas serves local governments through its training facilities at the University basing its technical approach on their expertise and past experience with the federally developed system known as GRASS. They have developed pilot projects for some local jurisdictions and state level data bases which they have provided online. Central Washington University focuses on training in ARC/INFO for state planning and in three local governments and the Yakima Nation in the Yakima watershed. The north central center in Grand Forks, North Dakota, in affiliation with the University of North Dakota, focuses on relating real time weather data to other spatial attributes. In addition, this center has sought to implement ideas developed in other centers in the distance learning concept. The University of Wisconsin-Madison, functioning as the Great Lakes center, continues a long history of involvement

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in the application of this technology at the local level with strong focus on soils/land-use and the institutional aspects of the integration of a new technology.

The original objectives are to build new institutional frameworks for developing and disseminating geographic and related information to local decisionmakers has been largely completed. Each site has developed unique approaches to solving the greatest needs in their region for applications of these modern technologies and many innovative applications of these techniques have been implemented. New technologies, including Internet based educational and information exchange have created tremendous demand among National Center Resource Innovations' customers to expand its program to include these new technologies in order to bring their primarily rural users into new eras of public education and information management. Last year, the National Center Resource Innovation became a valued educator about the public roles in and information needs for precision farming. The Center's view is that information that can sustain individual farmer's decisions can also be extended to the needs of the local public agencies. Integrating temporal information, such as weather and satellite imagery, is needed by everyone who needs to model future effects of their decision upon land processes. The Center is moving forward into these new territories to facilitate many of the newest initiatives of federal agencies who must work together to build modern systems for public policy. As resources continue to be used and planning continues to be required, and as technology continues to evolve, systems, knowledge and decisions must continue to get better. It is reasonable to assume that while the need exists for the latter, a definitive completion date for the Center's work may not exist. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

No formal evaluation of this project has been developed by CSREES. In addition, each Center site prepared a cost-effectiveness study. Each site developed the study using the help of external users. The study found that for each federal dollar expended on this program, \$7.40 in value was realized. The analysis will be repeated for fiscal year 1997. However, in keeping with the administration's policy of awarding research grants competitively, no further Federal funding for this program as currently positioned is requested. Research could be continued at the state's discretion using formula and other public and private funding sources.

GULF COAST SHRIMP AQUACULTURE

Work under this program has addressed important research necessary for the development of a U.S. marine shrimp farming industry. Studies have been conducted on growout intensification, prevention and detection of diseases, seed production, and the development of high health and genetically improved stocks. Performance trials on selected stocks in various production systems have been conducted. Seed production systems have reached commercial feasibility. Protocols for viral detection have been improved and have led to the development of specific pathogen free stocks of commercial importance. A number of important viral pathogens of marine shrimp have been identified. Researchers have responded rapidly to viral infections that have severely impacted the U.S. shrimp farming industry. Researchers will intensify efforts aimed at preventing new introductions of exotic viral pathogens. In fiscal year 1997, emphasis will be placed on the industry seed supply, disease control, environmental quality, and production systems. The principal researcher indicates that there is potential to enhance domestic production of marine shrimp through aquaculture in order to reduce the annual trade deficit in marine shrimp, which is approximately \$2 billion. Research could improve the supply of high quality seed, improve shrimp health management, and enhance production efficiency in shrimp culture systems. The U.S. has the opportunity to become a major exporter of shrimp seed and broodstock, and disease control technologies, products and services. Increased efforts are needed to prevent the introduction and spread of a number of exotic viral pathogens of shrimp. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this grant. At the discretion of the state, Hatch Act or other funding could be used to support this research.

The original goal was to increase domestic production of marine shrimp through aquaculture. Studies have been conducted on growout intensification, prevention and detection of diseases, seed production, and the development of specific pathogen free stocks. Commercially viable shrimp seed production systems have been developed. Diagnostic techniques for a number of important viral pathogens have been developed. High health genetically improved stocks are being developed and evaluated under commercial production conditions. Researchers have responded to severe disease outbreaks caused by the introduction of exotic viral pathogens into U.S.

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shrimp farms. In addition, scientists are currently developing biosecurity protocols to prevent additional introductions of viral disease agents.

Grants have been awarded from funds appropriated as follows: fiscal year 1985, \$1,050,000; fiscal year 1986, \$1,236,000; fiscal year 1987, \$2,026,000; fiscal year 1988, \$2,236,000; fiscal year 1989, \$2,736,000; fiscal year 1990, \$3,195,000; fiscal year 1991, \$3,365,000; fiscal years 1992–1993, \$3,500,000 per year; fiscal year 1994, \$3,290,000; fiscal year 1995, \$2,852,000; fiscal year 1996, \$3,054,000; and fiscal year 1997, \$3,354,000. A total of \$35,394,000 has been appropriated.

The U.S. Marine Shrimp Farming Consortium estimates that non-federal funding for this program approaches 50 percent of the Federal funding for fiscal years 1991–1996. The source of non-federal funding is primarily from state and miscellaneous sources. In-kind contributions from the industry were not included in this estimate, but are substantial as the program is dependent upon industry cooperation to carry out large scale commercial trials.

The work is being carried out through grants awarded to the Oceanic Institute, Hawaii and the Gulf Coast Research Laboratory in Mississippi. In addition, research is conducted through subcontracts at the University of Southern Mississippi, Tufts University, the Waddell Mariculture Center in South Carolina, the Texas Agricultural Experiment Station, and the University of Arizona. The anticipated completion date for the original specific research objectives was 1987. The original specific objectives have been met, however broader research goals have not been met. Researchers anticipate that the specific research outlined in the current proposal will be completed in fiscal year 1998. Keeping with the Administration's policy of awarding research grants competitively, no further funding for this grant is requested.

The agency evaluates the progress of this program on an annual basis. The institutions involved in this program submit a detailed accomplishment report each year prior to the submission of the new grant proposal. In addition, the agency conducts an in-depth on site review of the program every three years. The 1997 review of the program indicates that the process during the last twelve months has been well documented; close linkage between the research and the U.S. shrimp farming industry has greatly enhanced the commercialization of research findings; and the proposed research represents a logical progression of previous work conducted under the program.

MISSISSIPPI VALLEY STATE UNIVERSITY

Funds were used to strengthen academic programs, including accreditation and reaccreditation. Of the ten programs eligible for accreditation, nine have been accredited. Assessment of the criteria has begun for the remaining eligible program. Academic programs have been broadened to include more agriculture-related courses consistent with the needs of students from the Mississippi Delta, students from other parts of the State, as well as out-of-state students. Curriculum additions have had a positive impact on student enrollment. Courses continue to be modified to reflect the needs of graduates as well as employers in the Mississippi Delta, with particular emphasis on those areas that employers have the greatest need. The funds continue to provide enhancements related to other program and administrative support areas that positively impact program delivery and administration at Mississippi Valley State University. The primary need for this project is to satisfy a local need. The need is for strengthening university capacity and curriculum development at Mississippi Valley State University. Degree programs in Accounting, Mass Communications, Music and Public Administration have been added since the 1988 plan was developed. The Criminal Justice program has been developed into a departmental unit with social work in order to provide for improved administration and academic counseling. A master's program in Criminal Justice is now offered. The baccalaureate major in chemistry and the master's program in Elementary Education have been reinstated. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this Grant. At the discretion of the state, Hatch Act or other funding could be used to support this research.

The original goal was to provide funding to strengthen the academic programs of the university. The academic programs have been strengthened as evidenced by student recruitment, which has improved to show a positive ratio between applications received and students admitted. Approximately one half of the applicants are enrolled. Increased quality of instruction and programs have benefited students. This is reflected in the higher graduation rate, increased student enrollment, enriched faculty and improved community relationship.

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This program was initiated in fiscal year 1987. Grants have been awarded from funds appropriated as follows: fiscal year 1987, \$750,000; fiscal years 1988 and 1989, \$625,000 per year; fiscal year 1990, \$617,000; fiscal year 1991, \$642,000; fiscal years 1992 and 1993, \$668,000 per year; fiscal year 1994, \$93,000; fiscal year 1995, \$544,000; fiscal year 1996, \$583,000; and fiscal year 1997 \$583,000. A total of \$6,898,000 was appropriated.

Mississippi Valley State received State and private funding during the period of this grant. The State figures provided here are for enhancement funds provided in addition to the University's standard formula generated funds. The sources and amounts are as listed:

SOURCE

Fiscal year	State	Private	Total
1987 .....	.....	\$168,640	\$168,640
1988 .....	.....	186,036	186,036
1989	\$68,658	190,258	258,916
1990	207,879	369,358	577,237
1991	333,263	337,700	670,963
1992	349,427	470,220	819,647
1993	35,750	358,680	394,430
1994	590,890	568,970	1,159,860
1995	841,654	530,300	1,371,954
1996	1,197,917	590,824	1,788,741

These funds are intended to strengthen programs at Mississippi Valley State University. The program has been carried out on the campus at Itta Bena and at off-campus sites in Anguilla and Greenville and the Greenwood Center since the Spring Semester of 1996. The objectives of the current grant will be completed by September 30, 1997. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

The program has been evaluated on an annual basis by the agency. The annual progress report for fiscal year 1996 revealed steady progress in the academic programs. For example, the Social Work Department had significant positive changes in the quantity and quality of the faculty. The Business Department offered a component dealing with Agricultural land lease in the business law classes and the other classes had topics on input and output analysis, agricultural stimulations and initial farm planning.

NATIONAL EDUCATION CENTER FOR AGRICULTURAL SAFETY, IOWA

CSREES has requested the college to submit a grant proposal that has been received. The proposal is currently being reviewed. The Northeast Iowa Community College is requesting funding for a national center for agricultural safety education. The center will conduct a safety training needs assessment of workers and employees involved in production agriculture, plan, implement, and evaluate training on safety and health issues derived from the needs assessment, and provide hands-on training for farm accident rescue. The National Safety Council estimated that 800 agricultural work deaths occurred in 1995. Of these deaths 55 percent resulted from unintentional injuries suffered in farm tractor overturns. Another 140,000 disabling injuries were recorded in 1995 in agricultural work incidents. Many of these injuries resulted from farm machinery entanglements, working with livestock, and highway collisions between farm machinery and vehicles. Emergency medical services personnel are often exposed to the same hazards as the victims they are attempting to rescue. Emergency medical services personnel must be prepared to deal with these hazards under stressful environmental conditions. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this grant. At the discretion of the state, Hatch Act or other funding could be used to support this research. The goal of this research is to provide on-site, hands-on training of emergency response personnel who may be called on to respond to a wide range of agriculture related accidents and emergencies. Participants in the short courses offered by the center would then be prepared to pass on their knowledge to others when they return to their communities. There are no accomplishments to date.

The work supported by this grant begins in fiscal year 1997 and the appropriation for fiscal year 1997 is \$300,000. The non-federal funds and sources provided for this

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grant are as follows: \$1,000,000 state appropriations, and \$65,802 miscellaneous in fiscal year 1997.

Research will be conducted at the Northeast Iowa Community College, Peosta, Illinois. The anticipated completion date for the original objectives is September 30, 1997. Keeping with the administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

There has been no evaluation of this project yet as it is to be newly funded in 1997.

PM-10 STUDY, CALIFORNIA AND WASHINGTON

The research on PM-10 is being conducted by scientists at the University of California, Davis and Washington State University. The California program has focused on developing and refining methods to accurately measure and detect the sources of PM-10 emissions from various agricultural practices, and to investigate alternative practices for reducing potential air pollution on susceptible California crops and soils. In addition, the California project is also measuring PM-2.5 and even more refined size distributions, as well as identifying the constituents in all emissions samples in order to better characterize the size distribution and possible sources of the emissions. The Washington State University scientists are using refined instruments on field sites to measure and predict the effects of wind erosion and agricultural practices in the Columbia River Basin region on PM-10 emissions, with the assistance of a portable wind tunnel. Alternative cropping systems, tillage practices, rotations, and weed control practices are being developed and compared for control of PM-10 emission pollution under Columbia River Basin conditions. The principal researcher believes there has been growing national concern over the potential health and safety aspects of air pollution from dusts and suspended particulate matter, resulting in passage of the 1990 Clean Air Act which requires the monitoring and control of such pollution. Because of particular problems from PM-10 emission in the arid regions of the Western United States, more accurate information is needed on the role of agricultural operations in intensively cultivated soils in California and the Columbia River Basin, as sources of PM-10 pollution, in order to assist growers to develop alternative agricultural management practices to control PM-10 emissions. In view of significant needs for research in high priority national interest topics such as improved pest management systems, funds are not proposed to continue this grant. At the discretion of the state, Hatch Act or other funding sources could be used to support this research.

The original goals of this research were to measure the PM-10 emission rates from significant crop and tillage practices, to determine the source of PM-10 emissions on soils in agricultural regions of southern California and the Columbia River Basin in the Pacific Northwest, and to explore cost-effective alternative agricultural practices to control these emissions. The third year of field measurements are being completed on PM-10 emissions on production practices on almonds, figs, walnuts, wheat, and from dairy far-farms and feedlots in California, and on a number of agricultural practices in the rainfed and dryland croplands in the Columbia River Basin. Susceptible climatic and soil conditions and tillage and cropping practices have been identified and are being used to develop prediction tools to assist growers to adopt alternative practices to reduce potential air pollution by PM-10 particulate emissions. Measurements continue to be taken in these areas. In addition, preliminary efforts are underway to collect ammonia samples. This is important because the peaks in PM-10 emissions in California occur in December and January. Plans have also been developed to study the impacts of land preparation techniques on emissions.

The work supported by this grant began in March 1994. The appropriation for fiscal year 1994 was \$940,000; fiscal year 1995, \$815,000; and for fiscal years 1996 and 1997, \$873,000 per year. A total of \$3,501,000 has been appropriated. The program is matched by State funds in the form of salaries, benefits, and operating costs.

This work is being directed by participating scientists at the University of California, Davis, and at the Washington State University. The anticipated completion date of the original objectives of this project is 2000. The first four objectives of the project on soil particle characterization are nearing completion. The objectives on field control will continue. Quarterly reports on the entire project to date are available. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

The agency's Program Manager annually reviews the research progress reports and proposed new research, and attends the annual meetings of the program to assess progress. The program is also evaluated each year by technical, administrative, and agency personnel. Progress is reported at research review meetings three times

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a year. Printed reports are available from each, meeting. Grower and public advisory committees are consulted for input on research progress and objectives.

RURAL PARTNERSHIPS, NEBRASKA

The Rural Partnership Project is a comprehensive effort to transform the way that Federal, State, and local institutions deliver education and services to rural constituents. It is designed to address the issues of mandates; community strategic planning and project implementation, impact of devolution on local governments; profiling of rural constituents as to challenges, gaps in services, and opportunities; impact modeling; and sustaining development organizations. The principal researchers believe delivery and evaluation of programming delivered by Federal agencies is undergoing significant transitions. Research needs to direct the most effective and efficient means of program delivery and impact. This project is designed to provide insights and experience in alternative delivery formats in conjunction with partners at local, state, regional, and federal levels. In view of significant needs for research in high priority national interest topics, such as improved pest management programs, funds are not proposed to continue this grant. At the discretion of the State, Hatch Act or other funding could be used to support this research. The original goal of this research was to provide guidance in the delivery of information, technical assistance, and strategy related to rural economic development. Nebraska has transformed many of its education and service delivery formats based on this applied research activity. This project received Vice-President Gore's "Hammer Award" in December 1996.

The work supported by this grant began in fiscal year 1996 and the appropriation for fiscal year 1996 and fiscal year 1997 was \$250,000. A total of \$500,000 has been appropriated. Non-Federal funds were limited to staff and researcher support.

Research is being conducted at the University of Nebraska. This is an on-going research activity. The project which was begun in 1996 is now demonstrating early impacts of restructured delivery and implementation approaches for programs. The existing project is scheduled for completion September 30, 1998. However, in keeping with the Administration's policy of awarding research grants competitively, no further Federal funding is requested for this grant.

The agency evaluates merit of research proposals as submitted. No formal evaluation of this project has been conducted.

WATER QUALITY—ILLINOIS

The Illinois Groundwater Consortium grew out of a fiscal year 1990 appropriation of \$500,000 to Southern Illinois University at Carbondale to focus on the short-and long-term effects of agricultural chemical contamination on the environment, the ground water, and ultimately, human health and welfare. As a result of this appropriation, the University joined forces with the Illinois State Geological Survey, Illinois State Water Survey, University of Illinois Cooperative Extension Service, and the University of Illinois Agricultural Experiment Station to create the Illinois Groundwater Consortium. The Consortium's primary mission, then and now, is to effectively work toward providing a scientifically-valid basis upon which meaningful agricultural chemical management and regulatory decisions can be based. The Consortium has worked to address the concerns of the agricultural and agrichemical industries as well as the valid concerns of the agencies charged with protection of environmental quality. Examples of topics currently under study include:

1. Flood-Induced Loading of Agricultural Chemicals to Public Water Supply Wells in Selected Reaches of the Illinois River
2. Development of a Conceptual Framework for Sustainable Ecosystem-Based Management of Floodplains Along the Mississippi River
3. The Impact of Flooding on the Water Quality of an Alluvial Aquifer at Henry, Illinois: First-Year Progress
4. Conservation Compliance and Agricultural Producers in the Corn Belt: Implications for Strategic Planning and Policy Implementation
5. Transport and Fate of Agrichemicals in an Alluvial Aquifer During Normal and Flood Conditions: A Preliminary Study
6. Nitrogen Dynamics of Agricultural Watersheds in Central Illinois
7. Assessing the Reliability and Stability of Policies to Reduce Agricultural Chemicals in Public Water Supplies.

The principal researcher believes that, as the Consortium enters its seventh year, the fiscal year 1997 appropriation is targeted to research pertaining to the impacts, recovery, and remediation of the Midwestern region after flooding. The 1993 and 1995 flooding of the Mississippi, Missouri, and Illinois Rivers, and their tributaries, created devastating effects on the farm lands, communities, and natural resources

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of the area. These effects have major implications for agricultural practices, water quality, and public policy decisions. This natural catastrophe has resulted in a need for further studies examining the impact of the flooding on surface/ground water, soils and their rehabilitation, biodiversity, and on economic and public policy in the region. In addition, there is the need to disseminate results to the public to enable the Consortium findings to be beneficial in the near term to those needing the information. To facilitate this work, the Consortium expanded its participant institutions in 1995 to include Southern Illinois University at Edwardsville. Southern Illinois University at Edwardsville's strategic location in the heart of the flood damage area, as well as its qualified research scientists who work in the Consortium's high priority research areas, will strengthen the capabilities of the Consortium. The highest priorities of the Consortium is the funding of research upon which public policymakers working on land use or ground water protection issues in flood plain areas can base decisions, and the broad dissemination of this information. In view of significant needs for research in high priority national interest topics such as pest management systems, funds are not proposed to continue this grant. At the discretion of the state, Hatch Act or other funding could be used to support this research.

The Illinois Groundwater Consortium was established to coordinate and support research on agricultural chemicals in Illinois ground waters. The research team has accomplished an improved understanding of the fate and movement of agricultural chemicals under Illinois crop production conditions. A publication supported by the Consortium entitled, "Buried Treasure: 50 Ways Farmers Can Protect Their Groundwater," has received widespread acceptance and use for lay audiences. The Illinois Groundwater Consortium has accomplished a major step toward coordination and exchange of information-nation/research results relating to ground waters in Illinois. The Groundwater Bulletin reports research results from the Consortium. The Bulletin reports on atrazine studies, nitrogen management, farming practices for more efficient chemical use, geological impacts and policy options to safeguard ground waters. The Consortium investigators took an active role in monitoring and investigating herbicide, pesticide and coliform impacts during and after the Mississippi River Flood of 1993. The research continues today on the long-term impacts of flooding and management of the affected areas. The findings from this study will be useful in restoring the flooded cropland to full productivity and in establishing a base upon which policy management decisions can be made. The Consortium annually publishes a proceedings of its annual conference. The 1996 Proceedings of the Sixth Annual Conference contains 320 pages of research results. The Consortium represents an exceptionally productive cooperative effort involving several universities and agencies.

Research grants have been awarded from funds appropriated as follows: fiscal year 1990, \$494,000; fiscal year 1991, \$600,000; and fiscal years 1992-1993, \$750,000 per year; fiscal year 1994, \$666,000; fiscal year 1995, \$460,000; and fiscal years 1996 and 1997, \$492,000 per year. A total of \$4,704,000 has been appropriated.

The non-federal funds and sources provided for this grant were as follows: \$255,891 state appropriations in 1991; \$447,237 state appropriations in 1992; \$644,054 state appropriations in 1993; and \$623,124 state appropriations in 1994. Non-federal and state funds for 1995 and 1996 have exceeded the federal funds.

The work is being carried out by the Illinois Groundwater Consortium and coordinated by the, Carbondale campus of Southern Illinois University. The research is being conducted by staff at the University of Illinois, Southern Illinois University, the Illinois State Geological Survey and the Illinois Water Survey at locations across the State.

This project was planned as a five-year study of the impacts and recovery of flooding in the Midwest. The original proposal and subsequent proposals identified both short-term objectives which are project goals that could be accomplished within one to two years and long-term objectives which are project goals that could be accomplished within two to five years. In calendar year 1996, two years of studies involving 26 projects were completed, and in calendar year 1997, eight new projects will begin. These projects are spread across areas identified as high priority, including studies of flood impacts on soil productivity and remediation, movement of chemicals in water and soils, bacteria and microbial life, plants and aquatic life, and on public policy impact. Progress in meeting short-term and long-term objectives has been excellent. The most complex task is coordinating research projects on flood issues involving multiple issues, such as biological, social, economic and political issues, where effective solutions await the expansion of research databases. It is anticipated that the projects will be completed in the year 2000. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding for this grant is requested.

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From its beginning, the projects funded through the Illinois Groundwater Consortium involve reviews by at least three faculty/researchers drawn from 27 different universities, state and federal labs and surveys, USDA research laboratories, and other research centers. This review system enables the IGC Advisory Committee to select projects with scientific merit from the group of proposals submitted for funding consideration. The titles, principal investigators names and affiliations, and budgets are submitted to USDA for review along with the IGC proposals for funding.

WATER QUALITY—NORTH DAKOTA

The overall objective of the research is to develop an understanding of the occurrence, transport and fate of agricultural chemicals found in representative field settings in the Northern Great Plains region of the United States. The ultimate goal is to provide a scientifically valid basis for management and regulation of these chemicals. This past year, the scope of the program was expanded to include water management issues in the Red River of the North drainage basin. The Red River Water Management Consortium, a partnership between public and private sectors, was established to address critical water quality and quantity issues in an area where agriculture is the predominant industry. A major objective of the Consortium program is to utilize results from the initial phases of this research program to find economical, practical, and timely technological solutions to water supply and water quality problems. By providing cofunding for the program, Red River Water Management Consortium members become active stakeholders in the research. This partnership ensures the practicality of the research performed and provides a model for the wise stewardship of water resources in other drainage basins in the United States. The principal researcher believes that the nation needs a scientifically valid basis upon which meaningful agricultural chemical management and regulatory decisions can be made. Chemicals in ground water present both a public health problem and an environmental quality problem of significant short-term and long-term importance on a local, regional and national scale. In addition, the principal researcher has established a water management consortium consisting of industry, municipalities, and other entities in partnership with state and Federal governments as a mechanism for transferring the results of this research program to the public. However, in view of the significant need for research in high priority national interest topics, such as improved pest management systems, funds are not proposed to continue this grant. At the discretion of the state, other funding could be used to support this research.

The original goal of the research program was to understand the occurrence, transport, and fate of agricultural chemicals in representative field settings in the northern Great Plains region so that scientifically valid decisions could be made for their management and regulation. Work on five of the seven sites originally instrumented under this program has been completed. Research at the two remaining sites is directed toward answering questions that have arisen during the course of this research program, specifically to determine the long-term trends in nitrate concentrations in a surficial aquifer under irrigated agriculture and to determine the source and trends for sulfate in a similar setting. Results from this program have been reported in journals, conference proceedings, and through presentations at national, state, and local meetings. To date, more than 40 presentations or publications have been made. In addition, two doctoral dissertations and one master's thesis have resulted from this program. Examples of important results obtained from this research include the following:

1. An understanding of agricultural chemical occurrence in ground water as determined by physical, chemical, and biological processes, transport mechanisms, management practices, and climatic factors.
2. Nitrate contamination of ground water in the northern Great Plains region of the United States is of even greater concern than pesticide contamination.
3. Biological denitrification is an extremely important process that determines the occurrence and distribution of nitrate and sulfate in aquifers in the northern Great Plains region.
4. Preferential flow mechanisms control the movement of water and contaminants in glaciated settings. Widely used flow models that do not account for preferential flow can severely underestimate the travel time and depth of contaminants.
5. Transport of pesticides on airborne particulate matter may present a major health threat and is an extremely important and poorly understood mechanism for the movement of pesticides to ground water recharge areas.

Finally, the researchers have established the Red River Water Management Consortium as a mechanism for transferring the results of the initial research to vested

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stakeholders in the region and to the general public in order to address water quantity and quality problems resulting from agricultural practices and agricultural development. Sustainable agricultural development throughout the United States must rely on a far better understanding of our water resources and the application of new water management technologies to address changes in the agricultural industry.

In 1989, \$1.0 million was appropriated under the ground water research program. Beginning in 1990, funds have been earmarked under the Direct Federal Administration program. Work supported by this grant was initiated in fiscal year 1990 with an appropriation of \$987,000. Subsequent appropriations have been \$750,000 in fiscal year 1991, \$500,000 per year in fiscal years 1992–1993; \$470,000 in 1994; \$407,000 in fiscal year 1995; and \$436,000 in fiscal years 1996 and 1997. A total of \$5,486,000 has been appropriated for this water quality research program.

Red River Water Management Consortium members provide cofunding to support their participation in the program. Cofunding provided by Red River Water Management Consortium members for fiscal year 1996 totaled \$59,700. Interest in this program is growing, and it is anticipated that at least \$80,000 in cost-share will be obtained during the 1997 fiscal year through membership fees. These funds are provided directly to the program and do not include in-kind costs incurred by the participants. In-kind costs incurred by the participants are estimated to be several hundred thousand dollars, although this estimate cannot be verified at this time. Field activities to determine the long-term trends of nitrate and sulfate and to determine the source of sulfate are being conducted in cooperation with the North Dakota State Water Commission. Water samples collected at the Elk Valley field site are being analyzed at the North Dakota State Water Commission laboratory. For this 3-year effort, 1996–1998, they have estimated a cash-equivalent funding in the amount of \$33,660. In addition, the North Dakota State Water Commission will conduct field sampling for the Energy and Environmental Research Center in the summer of 1997 to investigate the source of sulfate found in ground water in the Elk Valley aquifer. They have estimated the cash equivalent cost of these services to be approximately \$12,000.

Research is being conducted at the University of North Dakota through its Energy and Environmental Research Center and at field sites in North Dakota and Montana. In addition, a portion of the pesticide research was conducted at North Dakota State University. Cooperative efforts have resulted in work also being performed at cooperative institution locations such as, University of Waterloo, Victoria University, University of Montana, the Red River Resource Conservation and Development Council offices, and the North Dakota State Water Commission. The anticipated completion date for the original objectives of the project, specifically the field related research, was fall 1995. This research has been completed and the sites have been decommissioned, with the exception of those relating to long-term nitrate and sulfate monitoring and analysis. Work on nitrate and sulfate trends and occurrence such as activities resulting from initial findings of this research program, is scheduled for completion in 1999. The Red River Water Management Consortium was established in 1996 as a mechanism for transferring the information derived from this research program to the technical community and to the public for use in addressing water quality and quantity issues relating to agriculture and agricultural development. It is anticipated that Red River Water Management Consortium activities will continue for several years in order to meet the objectives as defined by the non-federal sponsors and the agency. Keeping with the Administration's policy of awarding research grants competitively, no further Federal funding is requested.

The last agency evaluation of this project was conducted in September 1996. The U.S. Department of Agriculture Technical Project Officer attended a meeting of the Red River Water Management Consortium to evaluate and determine the status of this effort, which is currently the focus of research program activities. The Project Officer was impressed with the progress made by the Red River Water Management Consortium during its first year and believes this program is an excellent example of how federal and state agencies, research and academic institutions, private industry, and the general public can work together to solve problems in an economical manner to benefit people, communities, and the nation.

BEEF IMPROVEMENT—ARKANSAS

The Arkansas Beef Improvement Program utilizes beef cattle farms to demonstrate cost-effective management practices. An Arkansas Beef Improvement Program Executive committee provides overall direction for the program. A second aspect of the Arkansas Beef Improvement Program is to inform all Arkansas cattle producers of the knowledge gained from the program. This project addresses pri-

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marily local needs by setting goals, evaluating resources and selecting the management practices that will help the cattle producer achieve those goals in the decision-making process. In view of significant needs for Extension efforts in high priority national interest topics, such as improved pest management systems, funds are not proposed to continue this program. At the discretion of the state, Smith-Lever formula or other funding could be redirected to support this program.

The original goal of the Arkansas Beef Improvement Program was to enhance the profitability and efficiency of Arkansas cattle producers. Accomplishments to date include the establishment of demonstration farms, collection of benchmark data including soil tests, production information, forage analyses and budgets, and renovation of pastures to increase grazing capacity. Identification of mineral deficiencies in beef cattle have been detected and corrected through proper supplementation and ration balancing. Three of the ten farms averaged a 32 percent increase in pounds of beef sold per animal unit. Various management changes including parasite control and forage/pasture management have been instituted. Use of a cow-calf enterprise budget has helped the producers identify both efficient and inefficient management practices and take corrective actions. Additional accomplishments for the Beef Improvement Program:

- Increased the net calf crop percentage from 85.6 percent to 96.0 percent—an increase of 10.4 percent
- Supplemental feed costs decreased by \$23.93 per animal resulting in a total farm saving of approximately \$3,000
- 205-day adjusted weaning weights have increased 7.6 percent—from 478 to 514 pounds
- Preweaning average daily gain has increased 7.5 percent—from 1.87 pounds to 2.01 pounds
- Weaning weight efficiency increased 5.1 percent—from 45.4 percent to 47.7 percent
- Production costs decreased 36.9 percent, with the break-even cost per pound of beef sold decreasing from \$.60 to \$.50.

\$184,000 was appropriated each fiscal year for this project from fiscal year 1993 through 1996. In fiscal year 1996 and 1997, \$197,000 was appropriated each year. A total of \$946,000 has been appropriated. \$95,000 has been provided by the state of Arkansas.

Ten Arkansas demonstration farms were selected, one in each of ten counties, to reflect the different types of cattle operations and cattle producers in the area. Farm sizes ranged from 140 to 920 acres with an average of 360 and herd sizes ranged from 20 to 170 head, averaging 66 head per farm. The Arkansas project started with 6 demonstration farms in 1992 and added 4 more farms in 1993. When the farms were selected, it was agreed the Extension team would work with the Arkansas cattle producer for 5 years.

Therefore, the first 6 demonstration farms completed the program at the end of 1996, and the remaining 4 farms will complete the program at the end of 1997. Data from the final year will be collected and summarized for evaluation. The objective of the Arkansas program was to demonstrate cost-effective management practices. The Arkansas Beef Improvement Program has been very successful with achieving its objectives. Keeping with the Administration's policy of awarding grants competitively, no further Federal funding is requested for this grant.

A CSREES review of the project is conducted annually. The 1996 review noted the project is taking a sound approach to improving beef production efficiency and profitability in Arkansas. The review complimented the approach by the project to disseminate the results widely through publications and educational programs for the benefit of other producers in Arkansas and beyond.

DELTA TEACHERS ACADEMY

The Delta Teachers Academy, which operates out of offices located in New Orleans, Louisiana, is conducted by the organization known as the National Faculty, headquartered in Atlanta, Georgia. It should be noted that our State Extension partners are not involved in this project. The National Faculty Delta Teachers Academy was launched in 1992 with a pilot grant of \$500,000 from the United States Department of Education. The United States Department of Agriculture's funding for the project began in 1994. The Delta Teachers Academy project is providing approximately 645 teachers at 40 sites throughout the seven Lower Mississippi Delta states with development opportunities by teaming them with university scholars in on-site sessions and residential summer institutes. The subjects focused on during these training opportunities are English, geography, history, mathematics, and science. According to the grant recipient, the 219-county area comprising the Lower

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Mississippi Delta region has been cited in reports by the Educational Testing Service and the National Center for Education Statistics as notably lagging in student performance in core academic areas. In 1989, Volunteers in Service to America characterized the area as the poorest region in the country. According to the Southern Regional Education Board, at least five of the Delta states have 20 percent or more of their school-age populations in poverty, with Mississippi topping the list at 34 percent. In its report to Congress in 1990, the Delta Development Commission cited serious educational problems including poor student performance in core content areas, demoralized teachers with little or no opportunity for academic development, and region-wide difficulty in recruiting and retaining qualified teachers. The Commission also stressed the links between these problems and the pervasive poverty and depressed economic conditions that characterize much of the seven-state Delta region. The Commission's report also cited that 75 percent of the region's work force lacks the basic reading skills necessary for technical training and specifically cites the need for improved teacher training as one means for breaking the cycle of poverty and economic noncompetitiveness. In view of the significant need for research and extension in high priority national interest topics such as integrated pest management systems, funds are not proposed to continue this grant.

The original and continuing goal of the project is to address the problem of insufficient professional development opportunities for the elementary and secondary teachers of the seven-state region. The Academy project has focused on the core subjects of English, geography, history, mathematics, and science. Humanities, language arts, social studies, reading, civics, and interdisciplinary subjects are also covered by some sites. The Delta Teachers Academy began by offering educational development activities for 100 teachers from approximately 50 rural districts at 10 sites. Training has now been expanded to include 645 teachers at 40 sites across the entire seven-state region. The project has improved teacher recruitment and retention in the region.

A total of \$13.661 million dollars has been appropriated to the Department of Agriculture for this project, including \$2 million dollars in fiscal year 1994, \$3.935 million dollars in fiscal year 1995, \$3.876 million dollars in fiscal year 1996, and \$3.850 million dollars in fiscal year 1997. There are no non-federal funds identified for this project.

The Delta Teachers Academy project is coordinated out of The National Faculty's Southern Region office in New Orleans, Louisiana. The project is being conducted at 40 sites selected from within the seven-state Lower Mississippi Delta region including the states of Arkansas, Kentucky, Illinois, Louisiana, Mississippi, Missouri, and Tennessee.

The original objective was to provide three full years of training to each faculty team established by the Delta Teachers Academy program. Training consists of four two-day academic sessions and one two-week summer institute for each team. This objective has been met for the original 24 faculty teams first funded under the fiscal year 1994 Department of Agriculture grant. The 15 additional teams established in 1995 have received two years of in service training, and the one new team established in fiscal year 1996 has received one year of training. By the end of the current fiscal year 1997 grant, 39 of the 40 faculty teams established by the Delta Teachers Academy will have met the original objective of the program. Objectives for the fiscal year 1997 grant include completing training for the 240 teachers at the 16 sites established during 1995 and 1996 and expanding professional development activities to an additional 340 teachers at 19 new sites throughout the seven-state Delta region. Additional objectives include sustaining professional development activities for the 350 teachers at 27 former Delta Teachers Academy sites through a new Academy Fellows Program and cultivating 15 to 20 potential sites for establishing new programs in fiscal year 1998. The anticipated completion date for any new program sites established in fiscal year 1997 would be at the end of the year 2000. Keeping with the Administration's policy of awarding grants competitively, no further Federal funding is proposed for this grant.

An assessment of the short-term impact of the Delta Teachers Academy by Westat, Inc. of Rockville, Maryland was completed in May 1995. Westat's study found that the vast majority of participants reported that the Academy had met their personal and professional needs by renewing their enthusiasm for teaching, improving their self-confidence, increasing their sense professionalism, improving their knowledge of specific content areas, enhancing their teaching methods, and providing opportunities to interact with peers. The study also provided considerable evidence that teachers are applying what they have learned from the Academy in their own classrooms. For example:

—86 percent said Academy activities had enhanced their knowledge of the academic subjects they teach;

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- 88 percent said the Academy had helped them develop new teaching skills and strategies;
- 95 percent said they were now better equipped to pursue further professional development;
- 8 percent said the Academy had prepared them to assume leadership roles in their schools;
- 89 percent noted changes in their students' work habits, attitudes, aspirations, and achievements.

United States General Accounting Office review of the Academy's programs was also conducted in fiscal year 1995. The General Accounting Office report—GAO/RCED-95-208 included summary statistics on over 1,000 teacher evaluations of Academy sessions as well as the General Accounting Office's own survey of participants. The General Accounting Office found that on average, participants reported that the Academy was more effective than any other teacher development program they had participated in, was very effective in renewing or enhancing knowledge in one or more academic subjects, and was generally effective in enhancing the teaching skills and strategies required for teaching challenging academic content.

In addition, a site visit of the Delta Teachers Academy offices in New Orleans, Louisiana and of the National Faculty's Summer Institute at Tulane University was conducted by the Cooperative State Research, Education, and Extension Service's National Program Leader for Higher Education and Evaluation, during July 1996. The site visit confirmed that participating teachers are very enthusiastic about the Delta Teachers Academy program, that the instruction provided by The National Faculty's university scholars is on target and appropriate to the K-12 teachers' needs, and that the facilities are very well suited to program requirements. The site visit further confirmed that the Delta Teachers Academy has strengthened the participating teachers' ability to teach by improving their content knowledge base, helped them become leaders of other teachers by requiring them to conduct staff development back at their home schools, and had a positive impact on student learning. School superintendents report greater student enthusiasm, more homework, and higher test scores for students whose teachers were in the Delta Teachers Academy program.

EXTENSION SPECIALIST (AR) (EXTENSION FARM MANAGEMENT EDUCATION PROJECT)

The Federal funds support a small/family farm management and marketing education program, headquartered at the South Central Family Farm Research Center, a USDA-ARS facility in Booneville, Arkansas. The program takes research generated at the Center and adapts it to management and marketing education programs to meet the needs of small family farmers and provides support to county and state extension personnel who actually deliver these programs. According to the grant recipients, nearly three fourths of all U. S. farms have gross sales less than \$50,000. In the 10 state area served by the Booneville Center this percentage is even higher. Both the research and extension programs are targeted to the needs of this small, family farm audience. The eight specific objectives of this project cover a variety of management and marketing needs of smaller farm operators to help them improve family income through improved management and marketing skills. However, in view of significant need for extension efforts in high priority national interest topics, funds are not proposed for this project. At the discretion of the State, Smith-Lever formula or other funds could be used to support this project. The original goal of the program was to develop a small/family farm management and marketing education program based on the research program of the Booneville Research Center, which considers the limitations and potentials faced by small family farmers as they decided how to improve farm efficiency and technology use, how to minimize risk under severe capital constraints, and how to combine farm enterprises on limited acreage to best utilize available family labor while minimizing capital investment.

This project began in fiscal year 1992 with an appropriation of \$92,000. Subsequent federal funds were \$92,000 in fiscal year 1993; \$92,000 in fiscal year 1994; \$92,000 in fiscal year 1995; \$99,000 in fiscal year 1996 and \$99,000 in fiscal year 1997. Appropriations to date total \$566,000.

The Arkansas Cooperative Extension Service has provided the following state funds: \$59,040 in fiscal year 1992; \$55,680 in fiscal year 1993; \$55,446 in fiscal year 1994; \$55,446 in fiscal year 1995; \$54,446 in fiscal year 1996; and \$46,364 in fiscal year 1997. Nonfederal funds provided to date amount to \$324,422.

The Arkansas Extension Farm Management Program is headquartered in Booneville, Arkansas, and serves the 10 south central states included in the service area of the ARS South Central Family Farm Research Center. The original proposal

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in 1992 was for a 12 month period; however the emphasis of the program has shifted as the educational needs of the target audience and as the research program of the Center have changed. During the current fiscal year, program emphasis is on provision of information about alternative farm enterprises and updating farm management application software. The current phase of the program runs through February of 1998. No further federal funding is requested.

CSREES performed a merit review of this program in January 1997 as we reviewed the proposal for 1997. The review concluded the project has been successful in meeting the specific educational needs of an underserved clientele group. The review also pointed out this program serves as an excellent example of cross-agency, and public-private, coordination and cooperation.

EXTENSION SPECIALIST, MISSISSIPPI

The Basic Weather Service and Extension project is a two phase program. The first year funding will be used to gather and disseminate critical agricultural weather data for producers and researchers in Mississippi and surrounding states. The grant proposal states that the Ag Weather Service facility was closed recently at Stoneville, Mississippi. This action has created a void in the availability of and access to critical weather data that producers and researchers use to make management decisions and formulate research projects, respectively. This is a first year project and the goal is to collect, maintain, and disseminate weather information for producers and researchers in Mississippi and surrounding states. In view of the significant high priority national interest extension topics such as IPM, funds are not proposed for this project. At the discretion of the state, Smith-Lever formula or other funds could be used to support this project.

This is a new program which is being planned and initiated this year. The first year appropriation is \$50,000. The State of Mississippi through the Mississippi Cooperative Extension Service and Delta Research & Extension Center is providing \$41,350 in state appropriated funds to support this project in 1997.

The project will be conducted at the Delta Research & Extension Center in Stoneville, Mississippi. This project is expected to continue into a Phase II program. Keeping with the administration's policy of awarding grants competitively, no further Federal funding is proposed for this grant.

This is a new project being initiated this fiscal year and for this reason no evaluation has been conducted yet.

INCOME ENHANCEMENT DEMONSTRATION, OHIO

The Federal funds support the Agricultural Business Enhancement Center which plays a major role in the development of the agricultural sector of Northwest Ohio. The Center provides a variety of management training programs, helps farms and other agribusinesses develop comprehensive business plans, and facilitates business networking. This grant is targeted to local Northwest Ohio needs. Farmers and other agribusiness firms must be able to adapt to a large number of major changes affecting the entire food system from the farmer to the consumer. These include changes in farm programs, globalization of markets, new technologies, information systems, consumers' concerns for food safety and nutrition, and society's concern for protecting the environment. Individuals, families, firms and communities in Northwest Ohio need to understand the changes, develop and implement effective strategies for managing change. In view of significant need for extension efforts in high priority national interest topics, funds are not proposed for this project. At the discretion of the State, Smith-Lever formula or other funds could be used to support this project. The original goal of the project was to help people develop new businesses and restructure and expand existing businesses in order to enhance incomes in Northwest Ohio. Recent accomplishments include several workshops to improve the management and marketing capacity of local farms and agribusiness firms. At the close of a special workshop for women in agriculture, 75 percent said their participation would improve management of the family farm. The Center has a major role in examining the feasibility of a new tomato processing plant in the region. The Center continues to conduct economic research on market opportunities, provide a variety of management training programs, help individual farms and other agribusinesses develop comprehensive business plans, and facilitate networking with businesses in other regions of the United States and around the world.

The project began in fiscal year 1991. Appropriations have been as follows: \$145,000 in fiscal year 1991; \$250,000 in fiscal years 1992 through 1995; and \$246,000 in fiscal years 1996 and 1997. Appropriations to date total \$1,637,000. The State of Ohio has appropriated the following funds: \$35,100 in fiscal year 1991; \$72,368 in fiscal year 1992; \$56,930 in fiscal year 1993; \$30,547 in fiscal year 1994;

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\$49,935 in fiscal year 1995; \$51,432 in fiscal year 1996; and \$48,664 in fiscal year 1997. Non-federal funding provided to date totals \$344,976.

The Agricultural Business Enhancement Center is located in Bowling Green, Ohio and serves eight counties in the Toledo Metropolitan Area. Project leadership and data analysis is being provided by the Department of Agricultural Economics, Ohio State University, Columbus, Ohio. The original proposal in 1991 was for a period of 12 month. The current phase of the program will be completed in September 1997. No further Federal funding is requested for this grant.

CSREES performed a merit review of the project in January 1997 as it evaluated the project proposal for 1997, and concluded that it plays a major role in enhancing the competitiveness of the agricultural sector in eight counties of Northwest Ohio and that it has been effective in stimulating economic development in that area.

INTEGRATED COW/CALF MANAGEMENT—IOWA

CHIPS is an integrated cow-calf resource management (IRM) program which originally targeted an eleven county area in southeast Iowa. The intent of the program is to improve the area's rural economy by maximizing the profit potential of individual livestock operations. The CHIPS concept was also initiated to promote the development of forage systems which utilize highly erodible land (HEL), including land to be released in the CRP program. The geographical area where CHIPS services are offered systematically expanded to over 20 southeast and south central Iowa counties through fiscal year 1995. Expansion of the CHIPS program in area covered, services offered, and cooperator numbers continued to increase in 1996, with technical support expanding to an additional 14 counties in east central and southwest Iowa. Southeast Iowa contains extensive areas of marginal lands which are highly erosive (HEL) and should not be intensively farmed with row crops. These rolling hills are capable of producing high quality forages and are supportive to the cattle industry. 1996 marks the beginning of the release of Conservation Reserve Program (CRP) contracts—with thousands of these acres categorized as HEL. CHIPS is instrumental in assisting producers as sound management decisions are finalized regarding these CRP acres. CHIPS's long-term sustainable approach supports cow-calf production on this marginal ground and provides one-on-one assistance as economic and production decisions are made. The importance of the CHIPS program is highlighted by the current depressed economic state of the cow-calf industry. Negative financial returns have been a reality over the past 18 months and most economists predict this financial environment will continue in 1998. However, in view of significant needs for Extension efforts in high priority national interest topics, such as improved pest management systems, funds are not proposed to continue this program. At the discretion of the state, Smith-Lever formula or other funding could be redirected to support this program.

The overall goal of CHIPS is to have a positive effect on the area's economy by improving the long-term profit potential of the local cattle industry. To address this broad project goal, CHIPS has set forth the following objectives:

- Improve profit potential of cooperator farms
- Identify issues and trends in management data.
- Raise the awareness and understanding of over 2,000 agricultural producers in southeast Iowa about cow-calf production on highly erosive land and the integrated resource management concept.
- Provide over 130 producers with intensive technical assistance to develop goals and individualized farm recommendations, including management areas such as pasture and forage production, rations, utilization of resources, record systems, and government farm program compliance. During 1997, the number of operations served is expected to increase to approximately 200.
- Help producers develop management skills to improve efficiency and reduce costs of production as CHIPS recommendations are implemented.

Over 130 cooperators, involving approximately 11,000 beef cows, are currently enrolled and participating in the CHIPS program. Four full-time technicians and one part-time specialist have conducted over 600 farm/office consultations during fiscal year 1996 to develop specific on-the-farm recommendations and assist with the problem solving and decision making process. These contacts involved a wide variety of technical assistance, with primary emphasis on nutrition, cost-effective ration development, genetic evaluation, value added practices, and cow production concerns. Over 60 cooperators have incorporated the Cow Herd Appraisal of Performance Software (CHAPS) and Standardized Performance Analysis (SPA) programs in their operations. During fiscal year 1996, 3000 head of beef animals were permanently identified to facilitate record and data collection. More than 7500 cattle were weighed and monitored to evaluate performance and production levels. Over 250 forage sam-

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ples were collected and analyzed, with the information being utilized in over 300 individualized ration recommendations. Selected management recommendations are highlighted by CHIPS technicians on a monthly basis. These financial and/or performance impacts are summarized in a report prepared and distributed quarterly.

Two networking projects are being developed through the efforts of the staff involved with the CHIPS program. A CHIPS Heifer Development Program was initiated in November, 1996, coordinating the management of over 200 breeding heifers from 10 CHIPS cooperators. The goal of this project is (1) to incorporate technological advances in the area of heifer development, and (2) to improve the genetic base of these ten operations through the use of artificial insemination, genetic evaluations, and nutritional management. A CHIPS Feedlot Program is also being developed which will provide cooperators, regardless of the size of the operation, an opportunity to retain ownership of their animals from birth to market. This value-added approach will expand the marketing opportunities for individual cow-calf operations and improve the profit potential for cooperators with Genetically superior animals. A state-wide bull test evaluation is also being monitored by CHIPS personnel in conjunction with the Iowa Cattlemen's Association.

\$138,000 was approved for fiscal year 1992; \$138,000 was approved for fiscal year 1993; \$276,000 for fiscal year 1994; \$350,000 for fiscal year 1995; \$345,000 for fiscal year 1996; and \$345,000 for fiscal year 1997. Federal funding through fiscal year 1997 totals \$1,592,000.

CHIPS participants pay client fees of approximately \$3.00 per cow. This fee structure is on a sliding scale which adjusts for cow herd size. To date, approximately \$60,000 has been collected from CHIPS cooperators.

The CHIPS program is currently being operated in southeast and south central Iowa and involves the following counties: Van Buren, Davis, Jefferson, Wapello, Appanoose, Monroe, Mahaska, Keokuk, Washington, Henry, Des Moines, Louisa, Wayne, Marion, Lucas and Lee in southeast Iowa and Clarke, Decatur, Ringgold, Union, Adair, Adarns, and Taylor in the south central area. The fiscal year 1996 expansion effort extends CHIPS services to the following counties in east central and southwest Iowa: Jackson, Dubuque, Jones, Cedar, Clinton, Scott, Linn, Johnson, Fremont, Page, Mills, Montgomery, Pottawattamie, and With this expansion effort CHIPS is offering program services to approximately 60 percent of the state's cow-calf operations.

The CHIPS program was initially projected to address the goals and objectives of the project in a three year time frame. The objectives and goals of the CHIPS program will continue to be modified to meet the needs of the cooperators and to adjust to the rapidly changing cattle industry. The level of technical assistance and method of program delivery will require adaptation to meet the new objectives which emerge. Expansion of value added services is an area of increased interest by cooperators. Discussion with Precision Beef Alliance, a value added pasture-to-plate program, is scheduled. Keeping with the administration's policy of awarding grants competitively, no further Federal funding for this grant is requested.

A CSREES review of this project is conducted annually. The CSREES project liaison met with the project leader during 1996 to discuss plans for expansion of the CHIPS program. The 1996 review found a comprehensive approach to enhancing the cow-calf industry in Iowa with a strong educational effort in addition to hands-on assistance with records and management decision making. The review noted activities to make CHIPS self-supporting and to evaluate its impact on producers.

PILOT TECHNOLOGY PROJECT, WISCONSIN

Primary industrial extension activity of the Manufacturing Technology Transfer program is the delivery of technical assistance to manufacturing companies. Executive direction in determining the assistance required will be provided by the Stout Technology Transfer Institute with direct consultation and long-term in-plant assistance delivered primarily through the efforts of university Project Managers and Co-op students. Direct assistance may be delivered through staff of the University of Wisconsin System (both two-and four-year institutions, and Extension services); the Wisconsin Technical College System; secondary schools; the private sector; professional societies, and private consultants, or attendance at state or national seminars. The projects also draws on many other state resources to add expertise and capacity to network facilitation and in-plant extension activities. American's manufacturers continue to face tremendous global competition. There are enormous pressures to improve the quality of products; reduce the time consumed to bring new products to market; and there remains an ever increasing demand to reduce the cost of products. Currently there is a strong movement in manufacturing to use speed-to-market combined with new product introduction as a tool to obtain a competitive

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advantage. While high quality and cost efficiencies continue to be mandatory commitments for today's manufacturers, great value is now being placed on speed-to-market. Large companies are not the only ones influenced by these trends. Small and medium size manufacturers often supply larger firms. Hence, they must be able to quickly process large amounts of information and solve complex problems. However, in view of significant needs for research in other high priority national interest topics, funds are not proposed to continue this grant. At the discretion of the State, other funding could be used to support this research.

The Manufacturing Technology Transfer program's principal objective is the development of a competitive, secure manufacturing base through the mechanism of industrial extension. The program principally targets small and medium size manufacturers in rural Wisconsin. This funding will: (1) continue to provide valuable industrial extension service to the target audience; (2) support the continued empirical development of an industrial extension model, and (3) investigate the use of super computer technologies to support global competitiveness of manufacturers. Specific accomplishments have been to:

- Perform plant evaluations.
- Identify opportunities for productivity improvements.
- Implement new organizational and operational methods.
- Investigate new manufacturing technology, with focus on super computing.
- Establish quality assurance/total quality systems.
- Establish ongoing training programs.
- Deliver on-site instruction in new technologies, improved methods and processes.

This project has been underway since fiscal year 1992 and was funded for \$165,000 in fiscal year 1992, fiscal year 1993, fiscal year 1994, fiscal year 1995, and for \$163,000 in fiscal year 1996 and fiscal year 1997 a total of \$986,000. No non-federal funds have been provided for this project.

The work will be carried out by the University of Wisconsin-Stout. The original proposal in 1992 was for a period of 12 months. However, the Manufacturing Technology Transfer Program was developed as a continuously evolving industrial extension strategy for serving the needs of the manufacturing community. As an ongoing project, the Manufacturing Technology Transfer Program is measured by success in meeting the objectives of the past five years' proposals, including the delivery of modernization assistance and development of an industrial extension model. The current phase of the program will be completed in 1997. In keeping with the Administration's policy of awarding grants competitively, no further Federal funding is requested for this grant.

To measure the success of the project, a client evaluation process has been developed which includes an evaluation questionnaire. At the conclusion of interaction, each client is asked to evaluate services by completing a survey which reflects the program's stated goals and results are available annually. Evaluations indicate significant forward strides in creation, new businesses, expanded productivity, and enhanced international competitiveness.

RANGE POLICY DEVELOPMENT, NEW MEXICO

The project is collecting economic data on a statewide basis. The data is being used to build an economic model that will allow policymakers to better understand how local and state economies are tied to primary industries, notably those industries using public lands. In New Mexico and throughout the western states, local economies are frequently tied to the use and management of public range and forest lands. By describing how local industries provide personal income as well as local, state, and Federal tax revenues, we may be better prepared to estimate the impacts of proposed legislation and to craft policies that will enhance, rather than detract, from local economies. However, in view of the significant high priority national needs for extension projects such as IPM, additional funding is not proposed for this grant. At the states discretion, Smith-Lever b&c funding could be used to continue this project. Each New Mexico county will have a detailed input/output model developed from state and county tax revenue data. The results of the economic model forecasts will be shared with county decisionmakers in public forums across the state.

This project was initiated in December 1994. It has been funded year-to-year to accomplish annual objectives. The first tier of objectives were met in 2 years. The project objectives are being revised for fiscal year 1997, and we anticipate another 2 years to complete the second phase of the project in September 1998. The total appropriation has been \$594,000. The project budget does not indicate any non-federal support. However, the economists working with this project have initiated a re-

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gional research project to follow up with the model, and the regional project includes investments from universities in seven western states.

According to the project coordinator, most of the original objectives have been accomplished. The investigators are currently collecting data to allow incorporation of other industry and government sectors into the model. These objectives should be accomplished in 2 years. Keeping with the Administration's policy of competitively awarding grants, no further Federal funding is proposed.

The proposal for continuing funding underwent merit review by a team of CSREES National Program Staff in June 1996 and a review of progress by the project liaison in November 1996. Both reviews were positive and returned recommendations that the project receive the funding earmarked for it in fiscal years 1996 and 1997.

RURAL CENTER AIDS/STD PREVENTION, INDIANA

This program created the Rural Center for AIDS/STD Prevention, formerly named the Rural Center for the Study and Promotion of HIV/STD Prevention, jointly between Indiana University, Bloomington, Indiana and Purdue University, West Lafayette, Indiana. The Center is headquartered at Indiana University. The purposes of the Rural Center for AIDS/STD Prevention are (1) the development and evaluation of innovative educational material and approaches designed to reduce HIV/STD risk behavior and incidence in rural areas, and (2) the investigation of the social and behavioral barrier to HIV/STD prevention, the findings from which can be applied to the creation of prevention programming. The grant request states that many perceive that HIV/STD is only a problem in large urban areas. However, HIV/STD are found everywhere, including small towns and rural areas, suburbs, and large cities. HIV/STD are becoming increasingly serious in non-urban areas. In view of significant needs for extension efforts in high priority National interest topics such as improved pest management systems, funds are not proposed to continue this program. At the discretion of the State, existing Smith-Lever funding could be redirected to support this program.

The goals of this project are (1) the development and evaluation of innovative educational material and approaches designed to reduce HIV/STD risk behavior and incidence in rural areas, and (2) the investigation of the social and behavioral barrier to HIV/STD prevention, from which findings can be applied to the creation of prevention programming. Information has been compiled on the incidence and costs of rural HIV/STD; educational materials have been developed for field testing and evaluation; a national rural HIV/AIDS videoconference has been conducted; and a newsletter established. Accomplishments in fiscal year 1996 included the development of computer software and peer educational material; expansion of the Prevention Resources Library; analysis of selected HIV/STD-related determinants of rural adolescents, adults, and migrant farmworkers; needs assessments of women and children with HIV; modeling of the HIV epidemic; and caregiver/persons with AIDS/community linkages. In fiscal year 1997, proposed projects include assessing the health and family correlates of HIV/STD-risk behavior, development of HIV/STD prevention education material, modeling the effects of multiple drug therapies, and assessing the HIV education needs of rural special education students.

This is the fourth year of funding for this program. Work began on January 3, 1994. The fiscal year 1997 funding for this program is \$246,000. Total funds appropriated to date are as follows: \$250,000 in fiscal years 1994 and 1995; and \$246,000 in fiscal years 1996 and 1997 for a total amount of \$992,000. The source of non-federal funds for this program is state of Indiana appropriated funds to Indiana University. The amount of non-federal funds are \$145,406 in fiscal year 1994; \$83,141 in fiscal year 1995; \$91,979 in fiscal year 1996; and \$115,166 in fiscal year 1997 for a total non-federal funding amount of \$435,692.

The work is being carried out jointly in the Department of Applied Health Science, and the Center for AIDS Research, Indiana University, Bloomington, Indiana, and the Department of Sociology, Purdue University, West Lafayette, Indiana. The Center was established to provide leadership, particularly in the Midwest, in efforts toward stopping the spread of HIV infections and sexually transmitted diseases in rural areas since no other such center existed. The first year's objectives were to develop a rural AIDS education needs assessment, develop innovative youth educational material, develop a resources center, evaluate a new school-based curriculum, develop family intervention strategies for decreasing adolescent risk behaviors, to assess the clinical and psychological needs of rural women and children with HIV, assess the needs of family caregivers for rural persons with AIDS, and examine the financial impact of HIV/STD on rural families. Since these projects are funded on an annual basis, the completion date for project objectives has been the end

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of each fiscal year. Keeping with the Administration's policy of awarding grants competitively, no further Federal funding for this grant is requested.

The agency receives quarterly and annual progress reports on the project. Based on these reports, the agency has found that the Center has consistently met its objectives in educational material development and educational program delivery. The Center has become the primary source of HIV, AIDS, and other STD educational materials and programs for rural America.

RURAL DEVELOPMENT, NEBRASKA

The Center for Rural Community Revitalization and Development, Nebraska Cooperative Extension Service has supported an on-going applied research/outreach effort to improve the delivery and impact of land grant programming to small and rural communities and businesses. The grant has allowed the institution and other State and Federal agencies to refine the delivery and efficiency of programming within the state of Nebraska. It has supported the development of program partnerships and alternative means of providing technical support to rural constituencies. The Center is providing cutting-edge approaches in the development and delivery of technical assistance to rural constituencies. Information age technology is being incorporated into the delivery of both university and Federal/State agency programming. In view of significant needs for research in high priority national interest topics, funds are not proposed to continue this project. At the discretion of the State, Smith-Lever formula or other funding could be used to support this project. The original goal was to provide improved technical assistance to distressed rural businesses and/or emerging businesses in distressed communities. Through a series of 72 workshops in 67 communities over 1,341 business owners/managers were provided technical assistance. Currently, new strategies are being developed to provide technical assistance in a more cost efficient method.

The project has been operating since October 1978 and Federal appropriations through fiscal year 1993 were \$1.74 million. For fiscal years 1994 and 1995, \$400,000 was appropriated each year, for fiscal year 1996 and 1997, \$386,000 was appropriated each year. Total funding to date is \$3,326,000. All Federal funds have been matched by an equivalent amount of non-federal funds each year of operation through fiscal year 1995. The fiscal year 1995 amount was \$99,305. The non-federal support has been primarily in the form of staff for the past two fiscal years.

Research is being conducted at the University of Nebraska. The original completion date was September 30, 1989. The original objectives of the research project have been met. The completion of additional objectives is scheduled for September 30, 1998. However, in keeping with the Administration's policy of awarding grants competitively, no further Federal funding for this grant is requested. Research could be continued at the State's discretion using formula funds.

The agency evaluates merit of research proposals as submitted. No formal evaluation of this project has been conducted.

RURAL DEVELOPMENT THROUGH TOURISM, NEW MEXICO

The Rural Economic Development Through Tourism Project is a rural-based economic development activity to create new jobs and sources of income in small and rural communities in a seven county area of New Mexico. The focus of the development is on tourism and related businesses. The program supports training, strategic planning, and technical assistance for communities and tourism businesses. This is a pilot project to demonstrate the effective development and implementation of training, education, and technical assistance related to rural tourism. Tourism development is a strong area of interest to many small and rural communities throughout the United States. However, in view of significant needs for extension efforts in high priority National interest topics, funds are not proposed to continue this program. At the discretion of the State, other funds such as Smith-Lever could be used to support this effort. The New Mexico Cooperative Extension was to spearhead a comprehensive program to assist small and rural communities in increasing economic development opportunities through tourism. A regional task force composed of extension representatives and community leaders from business, industry, education, and government at the federal, state, and local levels guides the development and implementation of effective and efficient programming to support rural tourism development. The results of REDTT include a video, a public relations program, an image study, a regional tourism map and guide, a regional tourism bus package, festival planning workshops, development of a regional agricultural tour, and development of a mini-grants funding program.

In fiscal years 1992 through 1995, \$230,000 was appropriated each year. In fiscal year 1996, \$227,000 was appropriated. For fiscal year 1997, \$227,000 has been ap-

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propriated for a total funding amount of \$1,374,000. In fiscal year 1992, \$38,764 of state matching funds were provided. For fiscal years 1993, 1994, 1995, and 1996, \$39,360 of state funds were provided. Fiscal year 1997 funds of \$39,040 are being provided.

Research/programming is being supported at the New Mexico State University. The original completion date was September 30, 1993. The original objectives of the research project have been met. The completion of additional objectives is scheduled for March 31, 1993. Keeping with the Administration's policy of awarding grants competitively, no further Federal funding is requested for this grant.

The agency evaluates the merit of research proposals as they are submitted. No formal evaluation of this project has been conducted.

RURAL DEVELOPMENT, OKLAHOMA

This program provides technical assistance to small business in support of job creation. It provides evaluation of new products and processes that may result in new industries or that may be applied to improve existing manufacturing processes. The program has resulted in job creation and industrial development through the operation of business incubators, new product and process fairs, marketing assistance to rural entrepreneurs, and financial assistance for plant expansion and new business starts. The operation of the rural incubator program that provides a stable and nurturing environment that small businesses need to grow into profitable concerns. These incubators consist of buildings designed for the specific purpose of starting a new manufacturing or technology-based company. Also small business needs access to technical assistance, worker training, technology transfer, financial aid, and business management assistance in order to stay competitive in domestic and world markets. However, in view of significant needs for research in other high priority national interest topics such as improved pest management systems, funds are not proposed to continue this grant. At the discretion of the State, other funding could be used to support this research, such as Smith-Lever.

The original goal of the program was to assist rural business in Southeast Oklahoma to get systematic access to improved technology, training, financial and business management assistance. Many accomplishments have resulted including financial assistance. Rural Enterprise, Inc., is a Certified Development Corporation for the Small Business Administration. As a result, Rural Enterprise, Inc., has obtained financing for entrepreneurs and businesses totaling \$66,392,855. Specific technical assistance efforts have included: working with a company regarding different ways to cut a radius in a board to allow a forklift to pick up pallets from the side making it a 4-way unit; working with a technology transfer center to assist a client in the design of a muffler for air tools to provide statistical data on decible reduction and frequency harmonics reductions; working with a company to identify and solve an engineering problem they were having with a new product.

Appropriations to date are as follows: \$433,000 in fiscal years 1988 and 1989; \$430,000 in fiscal year 1990; \$431,000 in fiscal year 1991; \$300,000 in fiscal years 1992 through 1995; and \$296,000 in fiscal years 1996 and 1997. Appropriations total \$3,519,000. No non-federal funds have been provided for this project.

The work is being carried out at Rural Enterprises, Inc., in Durant, Oklahoma. The original proposal in 1988 was for a period of 12 months. However, the objectives of Rural Enterprises, Inc., are on-going because of the nature of the activity. The clientele is diverse and decentralized. The engineering and management consultation model being pursued with individual clients results in a situation where hundreds of problems are being pursued simultaneously and when solved are replaced by new issues resulting from international competition, regulations, training needs, and changeover costs. The next phase of the program will be completed in 1997. In keeping with the administration's policy of awarding grants competitively, no further Federal funding is requested for this grant.

CSREES staff responsible for project liaison have conducted on-site visits and have formed evaluations through the agency's merit review process. Rural Enterprises itself conducts in ongoing evaluation process to measure the organization's effectiveness and efficiency in accomplishing its objectives and this is documented on a quarterly basis through our reporting system. Significant numbers of jobs and new businesses have resulted from this program.

RURAL REHABILITATION, GEORGIA

The program has tested the feasibility of providing satellite-based adult literacy education, in association with vocational rehabilitation services, to handicapped adults in rural Georgia. The program has developed curriculum, tested and adapted technology, established student recruitment and retention strategies, expanded to

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Statewide coverage, and provided successful adult literacy education. A state task force has estimated that 25 percent of Georgia's adult population is functionally illiterate. Illiteracy is regarded as a form of disability in Georgia. In view of significant needs for extension efforts in high priority National interest topics such as improved pest management systems, funds are not proposed to continue this program. At the discretion of the State, existing Smith-Lever funding could be redirected to support this program. The original goal of this program was to prove that distance learning can be an effective tool for reaching and teaching functionally illiterate adults in rural areas. This program has demonstrated that satellite-based literacy training, in cooperation with vocational rehabilitation services, can successfully provide adult literacy education designed to improve critical reading, writing, and thinking skills for handicapped rural adults. The program now enrolls about 640 students per quarter, with approximately 70 percent expected to complete the full eight quarters of literacy education. Over the past eight years, test scores and attendance rates of students in the satellite based program have shown that distance learning is an effective delivery system for instructing low-level readers and non-readers. Test scores and attendance rates of students in this program have been comparable to those of students in traditional, urban classes.

Funding for this program was initially appropriated in fiscal year 1989, and the program has been in operation since March 1989. Through fiscal year 1997, appropriations for this program have been as follows: \$129,000 in fiscal year 1989; \$256,000 in fiscal year 1990; \$256,000 in fiscal year 1991; \$256,000 in fiscal year 1992; \$250,000 in fiscal year 1993; \$250,000 in fiscal year 1994; \$250,000 in fiscal year 1995; \$246,000 in fiscal year 1996; and \$246,000 in fiscal year 1997. Funds appropriated to date total \$2,139,000.

The fiscal year 1997 source of non-federal funds provided for this program are state appropriated funds is from the Georgia Department of Adult Education. Prior years' sources also included private contributions from the Woodruff Foundation and other local foundations. Through fiscal year 1997, the total amount of non-federal funds provided the project has been \$6,697,581. The breakdown by fiscal year is \$164,000 in fiscal year 1988; \$270,500 in fiscal year 1989; \$809,675 in fiscal year 1990; \$656,765 in fiscal year 1991; \$65,000 in fiscal year 1992; \$1,019,821 in fiscal year 1993; \$20,000 in fiscal year 1994; \$872,500 in fiscal year 1995; \$1,500,000 in fiscal year 1996; and \$1,319,320 in fiscal year 1997.

The Georgia Tech Satellite Literacy Project is sponsored and operated by four organizations: Georgia Institute of Technology's Center for Rehabilitation Technology, the Center for Rehabilitation Technology (CRT), Inc., Literacy Action, Inc. and the Georgia Department of Technical and Adult Education. The program grantee is CRT, Inc., a private, not-for-profit business advisory board to the Center for Rehabilitation Technology, College of Architecture, Georgia Institute of Technology, from which the literacy instruction is provided.

The 100 classes at 77 adult literacy classroom sites, dispersed throughout the State of Georgia and one site in Virginia, include 18 technical schools, 42 adult learning centers, 8 high, middle or elementary schools, 3 universities, 3 libraries, 2 rehabilitation centers, and one other site.

It was anticipated that it would take three years to demonstrate that distance learning can be an effective tool for reaching and teaching functionally illiterate adults in rural areas. That original objective was met in fiscal year 1991. Additional objectives since fiscal year 1991 have been to expand the outreach of the satellite based adult literacy program to enough additional sites throughout the state of Georgia so that all potential participants have reasonable access to the program; to continually upgrade the quality of class programming and the technical capacities of the system. It is anticipated that the latest technological upgrades, expanding the capacity of the program more than twenty-five-fold (from seventy-seven to over 2,000 downlink sites), and a six-fold increase in broadcast hours, and making materials available as supplemental tools to all Georgia literacy classes, will be completed by the end of the current project period, February 28, 1998. Keeping with the Administration's policy of awarding grants competitively, no further Federal funding is requested for this project.

The agency receives annual reports on the project. Based on these reports, the agency has found that the project has made progress in demonstrating the feasibility of utilizing distance learning technology and teaching methods to provide adult literacy education programs to handicapped adults throughout the state of Georgia. The project has been successful in applying the latest distance education technology to both control the program cost per participant and, most recently, to expand the availability of the program.

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TECHNOLOGY TRANSFER PROJECTS, OKLAHOMA AND MISSISSIPPI

The original work plans involved the transfer of uncommercialized technologies from Federal laboratories and universities to rural businesses and communities. Over time, the objectives have evolved to providing more one-on-one assistance to small manufacturers. This type of assistance responds to the stated needs of the small manufacturing community and fills a recognized gap in the existing service provider community. Manufacturing extension programs throughout the country have identified one-on-one engineering technology assistance as a critical need for small manufacturers as they attempt to become more competitive and profitable. Oklahoma State University and Mississippi State University are the only public service providing organizations that have the demonstrated capability to provide such assistance in their respective areas. However, in view of significant needs for research in other high priority national interest topics such as improved pest management systems, funds are not proposed to continue this grant. At the discretion of the State, other funding could be used to support this effort, such as Smith-Lever. The primary goal of these programs is to contribute to an increase in business productivity, employment opportunities and per capita income by utilizing technology and information from Federal laboratories; Rural Enterprises Development Corporation and Industrial Technology Research and Development Center in Durant, Oklahoma; Mississippi State Food and Fiber Center; Vocational-Technical Education System; Center for Local Government Technology; Cooperative Extension Service; and other university departments and non-campus agencies. Specific program objectives are to:

- Develop greater profitability of existing enterprises.
- Aid in the acquisition, creation or expansion of business and industry in the area.
- Establish an effective response process for technological and industrial related inquires.
- Devise effective communication procedures regarding the program for the relevant audiences.

Funding appropriated to date is as follows: \$350,000 in fiscal years 1984 and 1985; \$335,000 in fiscal year 1986; \$333,000 in fiscal years 1987 through 1990; \$331,000 in fiscal years 1991 through 1995; and \$326,000 in fiscal years 1996 and 1997. Appropriations to date total \$4,674,000.

Although no non-federal funds have been required, Oklahoma State University and Mississippi State University have provided considerable amounts of matching support from state funds over the life of the project. For the past four years, for example, support has included a significant portion of engineering faculty salaries as well as the administrative support of county and district extension staff.

The work is being carried out at Mississippi State University and Oklahoma State University which are providing on-site assistance to small manufacturers. The original proposal in 1984 was for 12 months. The original objectives have been, and continue, to be met. Although individual client projects have a beginning and end, the technology transfer process is continuous. Over the past years, specific and measurable annual objectives and the achievement of objectives have been documented in annual reports. The objectives of both programs have been to: (1) continue the delivery of high-quality engineering assistance and technology transfer services to small manufacturers; (2) conduct joint workshops, client referral, and joint research and application projects; and (3) demonstrate a value of service to clients. The current phase of the program will be completed in 1997. In keeping with the Administration's policy of awarding grants competitively, no further Federal funding is requested for this grant.

Site visits and merit reviews have been conducted annually on these projects as well as client surveys by project staff themselves. Survey results have documented significant job creation, productivity enhancement, and local community economic activity.

WOOD BIOMASS, NEW YORK

The objective of this program is to expand, implement, and gain acceptance of wood biomass as a sustainable, renewable and environmentally friendly fuel source. Moreover, the program is viewed as a means of stimulating alternative forest products for the Nation's Central and Northern hardwood forests regions. The principal researchers believe that the project is of national interest. Biomass research studies through the U.S. Department of Agriculture and the Department of Energy span 20 or more years. As a result, the Nation is in a position to scientifically produce alternative fuels for power generation systems. Moreover, the Department of Agriculture and the Department of Energy research can provide information on the value of tree

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plantings to carbon sequestration, rural economic development, and soil erosion and sedimentation associated with conventional agriculture. However, in view of the significant research needs on national high priority issues, funding for this project is not proposed. At the State's discretion, Hatch Act or other funding could be used to support this effort. The goal of this project is to promote, via applied research and technology transfer: wood biomass for energy as an alternative farm product; the wise stewardship of land resources; the use of domestic, renewable and sustainable energy; and enhanced farm profitability. To accommodate this, scientists at the State University of New York are planting willow trials on several sites and under several conditions. Site preparation occurred during the spring and summer of 1996. Some planting occurred during the fall of 1996, and more is scheduled for the spring of 1997. Cornell University has hired a person to coordinate technology transfer resulting from this and predecessor projects.

This aspect of the program began with an appropriation of \$200,000 in fiscal year 1995; \$197,000 was appropriated in fiscal years 1996 and 1997 for a total of \$594,000. Four state partners and approximately 18 private partners contribute resources at a ratio of approximately 1.5 to 1 for this project.

The field work is being conducted near Syracuse, New York. Electronic and print media allows Cornell's technology transfer activities to extend far beyond that point. The scope of this project has local, state, regional, national, and international implications. The completion date for the original objectives of the project, willow cultivar planting, was September 30, 1996. With the addition of some new dimensions to the project, the completion date is now April 1, 1998. Because of the timing of one of the awards and some weather-related problems, not all of the original objectives have been met. Most of the unmet objectives should be completed by early summer. Keeping with the Administration's policy of awarding grants competitively, no further Federal funding is requested for this grant.

This project is reviewed annually through a merit examination of the annual proposed plans of work. In addition, the Project Administrator monitors progress through the reading of a series of required reports, plus frequent phone and e-mail contacts. The Project Administrator also met with the Principal Investigator in his office to discuss the project during the investigator's travels to the Washington, DC, area.

DATA INFORMATION SYSTEM

Question. Please provide a description of system development activities that have been funded.

Answer. The Cooperative State Research, Education, and Extension Service—CSREES—is in the process of funding a cooperative agreement with the University of Arkansas to provide national leadership in coordinating the efforts of our university partners in helping us determine appropriate content for a Research, Education, and Economics Information System—REEIS—wide information system. In addition, the University of Arkansas will provide essential services in managing and coordinating a national Steering Committee responsible for overseeing the overall design, development, testing, and implementation of REEIS. Similarly, funds have been allocated to employ a technical services manager and a program analyst to oversee contracting with outside sources to design and launch REEIS and to comply with the necessary clearances and regulations applicable to information technology systems. In addition, funds have been allocated to secure a temporary director through the Intergovernmental Personnel Act—IPA—to coordinate and guide the overall aspects of development, testing, and implementing REEIS. Remaining funds are being allocated for contracting with a private sector firm to conduct a strategic audit of available data and a national needs assessment.

Question. What is the national, regional or local need for this activity?

Answer. USDA's Research, Education, and Economics—REE—mission agencies and their university partners lack a central, integrated, user-friendly electronic information system capable of providing a knowledge base of the thousands of programs and projects for which they are responsible that focus on food, agriculture, natural resources, and rural development. Such an information system is increasingly needed to enable the Department and its partners to readily conduct both comprehensive baseline and ongoing assessments as well as evaluations of research, education, extension, and economics programs and projects. In recent years, this need has become more urgent for several reasons. First, the United States needs a visionary public funded research and development program to produce essential knowledge and innovations for meeting growing competition in a global market—which is largely attributable to the expanding research and development efforts of foreign nations. Second, a comprehensive information system is needed to serve as

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a primary reference source for development of new research and education projects on such diverse issues as increasing productivity in agriculture and processing, improving the safety and quality of food, and enhancing the sustainability of the environment and rural communities. Third, Federal/State policy makers and administrators are requiring empirical analyses to account for historical, current, and future use of public funds and to provide a basis for redirecting funds to higher priority problems. Fourth, the Government Performance and Results Act—GPRA—has imposed reporting demands which current, decentralized information systems are not prepared to adequately satisfy.

Question. What was the original goal of this initiative and what has been accomplished to date?

Answer. The original goal of this initiative was to develop an information system that can provide real-time tracking of research, extension and education projects and programs; has the capability to communicate vertically between field, state and Federal locations; will enable the REE agencies and their partners to conduct rapid and comprehensive policy assessments and program evaluation analyses; facilitates assessment of technologies and practices employed in extension, education, economics and research activities at the field and/or regional levels; provides clear and transparent public access to relevant parts of the information; and provides information management tools to enhance the timeliness and accuracy of REE-wide responses to inquiries about program objectives and expenditures.

Question. How long has this work been underway and how much has been appropriated by fiscal year through fiscal year 1997?

Answer. Congress first appropriated \$0.4 million for REEIS in fiscal year 1997 to begin planning its design and development. We are in the process of establishing a National Steering Committee to provide advice and guidance throughout the development and implementation process. The Steering Committee will be chaired by a notable administrator of extension and research at a key land-grant university. It will be comprised of both users and producers of Research, Education, and Economics agencies' data, including program officials and program leaders, information system managers from other Federal agencies, representatives from Federal oversight agencies, program/project leaders representing partner institutions, and private sector users of REE data. Ultimately, this body will be responsible for recommending work specifications and for assessing the quality of work performed by an experienced and successful private contractor specializing in public-sector information systems.

Question. What is the source and amount of non-federal funds provided by fiscal year?

Answer. Non-federal funding does not apply at this time.

Question. Where is this work being carried out?

Answer. Leadership responsibility for REEIS resides within the Cooperative State Research, Education, and Extension Service's Science and Education Resources Development division. This provides for effective integration of the Current Research Information System, the Food and Agricultural Education Information System, and appropriate extension data bases. CSREES is working closely with all REE agencies and with the university system via a cooperative agreement with the University of Arkansas. We hope also to use the Intergovernmental Personnel Act to secure an IPA from another university to carry out REEIS essential management responsibilities. In addition, a process is underway to engage a private sector firm specializing in public-sector information systems to design, develop, test, and implement REEIS.

Question. What was the anticipated completion date for the original objectives of the project? Have those objectives been met? What is the anticipated completion date of additional or related objectives?

Answer. It is anticipated that REEIS can be operational by the year 2000. The current appropriation of \$400,000 will cover start-up costs such as establishment of a National Steering Committee, preparation and specifications for contracting with an outside firm, selection of a contractor, a needs assessment, identification of functional requirements, a draft plan for designing and developing the system including recommendations for in-house hardware, operating system, and software programs. The \$600,000 increase request for fiscal year 1998 will allow for implementing, testing, and refining a prototype, including preparation of an operations manual and a full-scale implementation and maintenance plan. The Research, Education, and Economics Information System meets a high priority national need for a continuing national information system. REEIS is being designed to meet the data information needs of all REE agencies and their university and private sector cooperators. It will link data systems on research, education, extension, and economics. Therefore, annual maintenance costs will be ongoing.

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Question. When was the last agency evaluation of this project? Provide a summary of the last evaluation conducted.

Answer. An evaluation of Research, Education, and Economics Information System is not appropriate at this early stage of development.

TRAVEL

Question. Please provide the Committee with a breakdown of your actual travel costs in fiscal year 1996.

Answer. In fiscal year 1996, the CSREES cost for Domestic travel was \$1,693,795 and the cost for Foreign travel was \$44,858.

Question. Please identify foreign travel obligations for fiscal years 1994, 1995, and estimates for fiscal years 1996 and 1997.

Answer. The information follows.

CSREES foreign travel obligations

<i>Fiscal year</i>	
1994	\$65,054
1995	33,506
1996	44,858
1997 (estimate)	79,848

Question. How many CSREES personnel were engaged in foreign trips in these years [fiscal years 1994, 1995, 1996, and 1997] and for what purposes?

Answer. The information follows.

FOREIGN TRIPS

Purposes of foreign trips	Fiscal year	No. of CSREES personnel
External CIP Review—Science Policy Presentation for NE Division of Agronomy—FAO's Meeting and IPM—Project development, site visits, and project reviews of International Programs projects.—5th World Congress on Genetics Applied to Livestock Production—40th International Congress of Meat Science and Technical Conference—International Society of Animal Genetics Conference—Meeting of the Society for Nutrition Education—NC-119 Meeting—NE-103 Meeting—Participate in the North American Association for Environmental Education and Manage two auxiliary meetings of Extension Environmental Education faculty—USDA Water Quality Project Review	1994	21
U.S. Delegate to International Council of IUFRO-XX World Congress—Project development, site visits, and project reviews of International Programs projects.—Biodiversity Convention—International Symposium on Nutrition & Health—Presentation on Agricultural Biotechnology Technology Transfer and Workshop—CIP Review—Chair Report of CIP Review—Aquaculture Policies Information Exchange—CGIAR Meeting—Caribbean Basin Agricultural Research Meeting—Presenting papers on Policy Options on Plant Protection and Pesticides—Horticultural Society Meeting—Poultry Science Association and Collateral Meeting—Lead U.S. Delegation and Case Study OECD Conference—"Patron of Congress" presenting a paper—To present invited papers—Regional IPM Project Meeting	1995	14
Review of Forestry Programs with Advisory Council of the Pacific Islands—International Workshop on Soil and Water Quality at Different Scales—NCR-59—Soil Organic Matter—Regional Research Committee—Project development, site visits, and project reviews of International Programs projects.—Farm Privatization Project Review—Scientific Exchange—Joint Meeting—American and International Evaluators' Association—U.S. Scientific Exchange Team on Biotech Applications—Seafood Sciences and Technology Society Meeting—Kenaf and Allied Fibers UNFAO—World Aquaculture Society meeting—External Panel, U.S. A.I.D. Funded Pond—ADAP Directors Meeting—Taule'ile Center for Tropical Agricultural Research—Ag CATIE on Horticultural Extension, Research, and Education—World's Poultry Congress and Exhibition—3rd Symposium on Industrial Crops and Products—IPM Project—International Congress of Meat Science and Technology—Caribbean Food Crops Society and CBAG Meeting—Paper on American Evaluation Association—NCR-22 Meeting—NADP/NTN Meeting—Conduct Workshop on GPRA of 1993—American Evaluation Association Meeting—Present selected paper "The Institutional Evolution of the Modern Polish Ag System"—Regional IPM project—National Extension Leadership Development—NELD—Seminar—Expert Consultation on Rural Youth Program	1996	22

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FOREIGN TRIPS—Continued

Purposes of foreign trips	Fiscal year	No. of CSREES personnel
Global Conference on Sorghum Ergot—ADAP and Western Regional Joint Meeting—Project development, site visits, and project reviews of International Programs projects.—Caribbean Food Crops Society and Tstar CBAG Meeting—Asian Center for Livestock Waste Management Meeting—2nd Symposium on the Epidemiology and Control of Salmonella in Pork—43rd Congress of Meat Science and Technology—2nd International Workshop on Transgenic Animals and Food Production—XV Panamerican Congress of Veterinarian Science Meeting—Guest Lecturer Bodles Research Station—USDA representative to co-convene the South African Binational Commission—Scientific Conference for SERD—The International Biotech Risk Assessment Symposium—American Society of Plant Physiology—CSREES Administrative and Financial Review of University of Guam and American Samoa University—International Congress of Plant Molecular Biology—Review of the Forest Science Department of the University of British Columbia, Canada—Meeting of the Society for Nutrition Education—Meet with State counterparts and participate in paper sessions in food safety, health, and nutrition.—The VII Meeting of International Grassland Congress—Present paper at the International Soil Erosion Congress	1997	28

QUESTIONS SUBMITTED BY SENATOR BOND

FUND FOR RURAL AMERICA

Question. For fiscal year 1997, the Fund for Rural America is structured in such a way that, in effect, it excludes large, visionary and ambitious projects such as the National Corn Genome Initiative—NCGI—from participation. The focus and the funding limits make it infeasible. I believe that this project is of vital interest to our efforts to retain our leadership position in agricultural research and to ensure that our producers have the tools necessary for environmentally responsible and sustainable agricultural production into the next century. Some day, someone in some country will develop this research and I feel strongly that it must be us. If not, we will likely risk much of the competitive advantage that visionary leaders of the past have earned for us today.

This project was specifically mentioned in Farm Bill report language and is precisely the kind of basic science that will be the basis for us being competitive into the next century. While I understand that many Fund for Rural America projects may yield early and visible benefits and are important, we should also have the vision to provide the tools that will be the key to success in the future.

I have started a dialogue with Dr. Gibbons of the Office of Science and Technology Policy and Dr. Lane at the National Science Foundation to see if another agency is willing, better funded or better suited to take this on.

I understand some modest efforts are underway but we know that an unfocused, underfunded or piecemeal approach will not do the job.

Does the Department have any intention of reconsidering its approach to the Fund for Rural America for fiscal year 1998 and fiscal year 1999 so that a project of this nature could become eligible?

Answer. The Department will evaluate fiscal year 1997 Fund operations in developing guidelines for fiscal year 1998 and fiscal year 1999 programs. It is unlikely, given the original mandate provided for in the 1996 Federal Agriculture Improvement and Reform Act, that the Fund will shift dramatically in focus to emphasize more fundamental research. This suggests that to be competitive, projects such as the National Corn Genome, would need to emphasize outcome-oriented research projects that include the end user through technology transfer.

This likely continued emphasis on applied research and related education and extension does not mean that the Fund is unresponsive to the need to “retain leadership in agricultural research” and “ensure . . . environmentally responsible and sustainable agriculture production.” The Fund was designed to further these goals by combining the knowledge generated from fundamental research with limited support for applied activities that lead to faster and hopefully larger payoffs on research dollars.

USDA has been very active in pursuing ways to increase Federal support of genomic mapping and sequencing activities including the sequencing of corn. However, prior to proceeding with a program designed to map one specific commodity, a number of scientific and administrative issues must be addressed. USDA has taken the lead in bringing together the National Science Foundation and the De-

partment of Energy to discuss how to determine what should be the focus of a genome program for agriculturally important species. As a result, USDA asked the National Academy of Science, National Research Council-Board on Agriculture in collaboration with the Board on Biology to conduct a discussion of this issue at the April 26th Academy meeting. Over 60 participants, including representatives from universities, private industry, commodity groups, and Federal agencies, engaged in a daylong discussion entitled "Designing an Agricultural Genome Program." An abbreviated draft report of this discussion will be released in May. Conclusions of the meeting included: (1) Strong support for continued and increased funding of investigator initiated individual efforts in genomic research, as is supported currently by the USDA, CSREES, National Research Initiative Competitive Grants Program—NRI, (2) A recommendation for the development of a genome program that would include both broad and more specific objectives of a) 100,000 Expressed Sequence Tags—EST's—for forty agricultural species—plant, animal, and microbe—that would provide important base-level genomic information, and b) a more specific sequencing activity on corn and sorghum, (3) A recommendation to resolve the proprietary issues of genomic research prior to proceeding on an extensive publically funded genomic effort. For example, the entire set of expressed corn genes may likely be isolated by private industry by the year 2000. Will the genomic information be in the public domain or will the Federal government find it necessary to fund the genome effort itself to assure public access? Because of the proprietary nature of industry efforts in genome sequencing, USDA is bringing together industry and Federal agencies to discuss this issue so that duplication of effort can be minimized. An interagency task force also is being established under the National Science and Technology Council (NSTC) to develop an initial plan, with the NRI Chief Scientist serving as chair.

Further science-based discussions of the genome issue will occur at a June National Academy Colloquium in Irvine, California entitled "Protecting Our Food Supply: The Value of Plant Genome Initiatives."

QUESTIONS SUBMITTED BY SENATOR BUMPERS

SPECIAL RESEARCH GRANTS

Question. Would you provide me an update on the following CSREES special grant items: Farm and Rural Business Finance; The Food Safety Consortium; Forestry (UAM); Global Marketing Support Service; The Institute for Food Science and Engineering; and Rice Modeling?

Answer. The information for these special research grants follows:

Farm and Rural Business Finance.—This program, which has a fiscal year 1997 appropriation of \$106,000, focuses on three principal areas. One is the financial management and performance of rural businesses. The second area includes research on financial markets and credit institutions serving rural America. The third area addresses the impact of public policies and programs on the financial health of rural America. The work is carried out at the University of Illinois and the University of Arkansas. The program has completed projects on the financial structure and efficiency of grain farms, risk and financial implications of coordination in hog production, commercial bank access to agency market funds through government-sponsored enterprises, and competitive challenges for bankers in financing agriculture.

The Animal Science Food Safety Consortium.—Research for this grant program, which has a fiscal year 1997 appropriation of \$1,690,000, focuses on developing detection, prevention, and monitoring techniques that will reduce or eliminate the presence of food borne pathogens and toxic substances from the Nation's red meat and poultry supplies. The consortium is organized and operated along institutional lines with a coordinator and directors managing the research program. Research is conducted at the University of Arkansas at Fayetteville, the University of Arkansas for Medical Science at Little Rock, Arkansas Children's Hospital, Iowa State University, and Kansas State University. Researchers under this grant studied Salmonella infection in infants and children, the application of polymerase chain reaction technology to detect and differentiate *Campylobacter jejuni* and the more prevalent *campylobacter coli* in pork, and demonstrated under commercial conditions that electronic identification systems to track and determine contamination points in beef cattle are feasible from an implant retention, operational, and retrievability standpoint.

Forestry Research.—Research supported by this grant, which has a fiscal year 1997 appropriation of \$523,000, offers programs of teaching and research to the

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landowners of Arkansas and the surrounding region by the Arkansas Forest Resources Center. The Center includes one of only three Arc View learning centers for natural resources, and has a staff well versed in the use of advanced technologies. This research is being conducted at the School of Forest Resources, the University of Arkansas at Monticello. Significant progress has been made in several areas, such as developing intensive fiber farming systems as alternatives to soybeans for Mississippi farmers, taking the first step toward biological control of the Southern pine beetle by discovering the nutrient needs of predators of the beetle so they can be grown and studied in artificial cultures, and conducting the first survey of nonindustrial landowners in Arkansas for 15 years. Ongoing projects include a broad array of topics concerned with best management practices, ecological characteristics, effects of different management intensities, and streamside buffer zone effectiveness.

Global Marketing Support Services.—This grant program, which has a fiscal year 1997 appropriation of \$92,000, provides research and service to agribusinesses. The objective of the university research is to identify potential foreign markets for Arkansas products and to conduct and disseminate foreign market assessment evaluation studies to agribusiness firms. This research is being conducted at the University of Arkansas in Fayetteville. Some of the recent results include, twelve “Industry/Company Opportunity Reports” that provided local businesses with information about potential export markets; a report on consumer attitudes in Mexico and Columbia toward imported products; an evaluation of the food system in China, with emphasis on poultry sector; two new fact sheets; and additions to an electronic export information database that is accessed by local firms.

Institute for Food Science and Engineering.—Research for this grant program has a fiscal year 1997 appropriation of \$750,000. As the flagship center for the Institute for Food Science and Engineering, the Center for Food Processing and Engineering facilitates and encourages value-added research and improves the efficiency and effectiveness of processing agricultural products. This research will be conducted at the University of Arkansas at Fayetteville. Research demonstrated promise for a high pressure water spray to remove phomopsis decay and brown rot tissue from peaches for processing. Progress was also made in modifying commercially-produced rice hull silicate to create silica gel. Other research results indicated that holding green and ripe peaches in elevated carbon dioxide atmosphere could reduce acidity and decay, possibly allowing fruits to ripen prior to processing without excessive losses to decay. The Institute also provided information to new food business entrepreneurs on food regulations, safety, labeling, ingredients, packaging, and financial aspects of starting a food business and on market products.

Rice Modeling.—Research for this grant program, which has a fiscal year 1997 appropriation of \$395,000, is used to develop a rice industry model with domestic and international components to aid U.S. farmers, millers, and policymakers in making production, investment, marketing, and public policy decisions. This research is being carried out at the University of Arkansas, Fayetteville, and the University of Missouri, Columbia, and is needed to assist both the U.S. rice industry and national policymakers in assessing the impact of existing and proposed changes in public policies for rice. This research enables improved analysis of both international and domestic policy changes on rice production, stocks, prices of substitute crops and consumption.

FEDERAL ADMINISTRATION

Question. Would you provide me an update on the Geographic Information System funded through CSREES Federal Administration?

Answer. This program, which has a fiscal year 1997 appropriation of \$844,000, is designed to transfer evolving geographic information systems technologies to state and local governments. This technology includes Internet access for information, databases, and telecommunication for cooperative system development. This research is being carried out by the National Center for Resource Innovation Chesapeake Bay located in Rosslyn, Virginia, with regional centers in Georgia, Arkansas, Wisconsin, North Dakota, and Washington. This project has provided the impetus and linkages to facilitate planning work done in South Georgia with some assistance given to local tax assessment and parcel identification by a Department of Commerce-sponsored Economic Development Authority. The Chesapeake project has linked seven state conservation entities in an effort to develop better watershed models and decision support systems. The Arkansas portion of the project has focused on training to educate county employees with regard to the technology of geographic information systems and geographic positioning systems. The Wisconsin portion has continued to simultaneously support the high technology end of the evolution of new tools and seek new ways to implement change while measuring the

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impact of such implementation. The work in North Dakota has continued to focus on geographically-referenced real time weather information for payments and others. The efforts in Washington have provided training for a number of state personnel and others from various levels and institutions on how to utilize geographic information systems.

EXTENSION PROGRAMS

Question. Would you provide me an update on the following CSREES Extension items: Beef Producers Improvement (Arkansas), and Delta Teachers Academy?

Answer. The information on these Extension programs follows:

Beef Producers Improvement, Arkansas.—The Arkansas Beef Improvement Program, which has a fiscal year 1997 appropriation of \$197,000, utilizes beef cattle farms to demonstrate cost-effective management practices. This project addresses primarily local needs by setting goals, evaluating resources, and selecting the management practices that will help the cattle producer achieve those goals in the decisionmaking process. This work is being carried out at ten Arkansas demonstration farms, one in each of ten counties, to reflect the different types of cattle operations and cattle producers in the area. Research to date include the establishment of demonstration farms, collection of benchmark data, including soil tests, production information, forage analyses and budgets, and renovation of pastures to increase grazing capacity.

Delta Teachers Academy.—The Delta Teachers Academy, which has a fiscal year 1997 appropriation of \$3,850,000, provides approximately 645 teachers at 40 sites throughout the seven Lower Mississippi Delta states with development opportunities by teaming them with university scholars in on-site sessions and residential summer institutes. The Delta Teachers Academy is coordinated out of The National Faculty's Southern Region office in New Orleans, Louisiana. The project is being conducted at 40 sites selected from within the seven-state Lower Mississippi Delta region including the states of Arkansas, Kentucky, Illinois, Louisiana, Mississippi, Missouri, and Tennessee. The Academy project has focused on the core subjects of English, geography, history, mathematics, and science. Humanities, language arts, social studies, reading, civics, and interdisciplinary subjects are also covered by some sites. The Delta Teachers Academy began offering educational development activities for 100 teachers from approximately 50 rural districts at 10 sites. Training has now been expanded to include 645 teachers at 40 sites across the entire seven-state region. The project has improved teacher recruitment and retention in the region.

QUESTIONS SUBMITTED BY SENATOR LEAHY

INTEGRATED PEST MANAGEMENT

Question. How much funding is the Department directing towards Integrated Pest Management and environmentally friendly techniques? What is the status of the USDA's goal to have 75 percent of U.S. agriculture using IPM? What research activities are being undertaken to help farmers reach this goal? What research activities are USDA undertaking to develop alternatives to comply with the Food Quality Protection Act?

Answer. The President's budget for fiscal year 1997 includes \$34.9 million for the Department's IPM Initiative and an additional \$119.5 million for the broad category of "IPM and Biocontrol."

The Department's National Agricultural Statistics Service is currently conducting national surveys of major field crops and selected fruits and vegetables to measure levels of IPM adoption. Much more work is needed to refine and implement a sound measurement methodology. Since the ERS report was published in 1994, additional studies have been completed by Department analysts and outside experts, and most support ERS' conclusion that 50 percent or more of the nation's crop acreage is currently managed under a "low" level of IPM but this varies significantly by crop and part of the country. Several analyses, including the one published by Consumers Union in "Pest Management at the Crossroads," have concluded that considerable more work is needed to help producers move along the IPM continuum to the "medium" and "high" levels. We believe that an accelerated effort is needed, and warranted, to help growers reduce reliance on high-risk pesticides and enhance the sustainability of farm operations.

The IPM programs supported and conducted by the Department and its land-grant university partners develop and deliver solutions to the pest management problems faced by our Nation's farmers and urban residents. These programs incor-

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porate fundamental knowledge of pest biology into education and training programs for farmers and other pest managers. In many cases, land-grant university scientists use the basic or fundamental knowledge generated by Agricultural Research Service scientists or through support from the National Research Initiative as the basis for further applied research, research validation trials, and finally disseminate this information to agricultural producers through Cooperative Extension. The Department's IPM programs are designed to develop and help farmers and other pest managers implement new pest management approaches to critical pest problems, increase profitability and protect the environment. The Agricultural Research Service's Areawide IPM Program is demonstrating the effectiveness of new technologies over large areas. Areawide projects are participatory programs that blend ARS resources and expertise with those of CSREES and its land-grant university partners to get IPM methods widely implemented in a production region. The Regional Integrated Pest Management Grants Program provides a science basis for the development of alternative approaches for managing pests including insects, mites, weeds, plant pathogens, and ectoparasites. Research supported by this program includes the development of individual pest control tactics and the integration of multiple tactics into an IPM system. The Pest Management Alternatives Program is designed to develop alternative pest management tactics to replace those lost through EPA cancellation or voluntary withdrawal. Research supported by this program develops new and environmentally-friendly tactics for the highest priority needs.

The Department's IPM research programs will play a critical role in developing pest management alternatives that comply with the "Food Quality Protection Act of 1996." A special program addressing Food Quality Protection Act Issues will address pest management on food and feed crops impacted by implementation of the Food Quality Protection Act. USDA and EPA will support projects that result in: 1) a better understanding of how these pesticides are used, how important each particular use pattern is and the attributes and constraints of existing alternatives and/or how a significant reduction of risk to human health or the environment that would result from replacement or mitigation technologies; 2) identification of situations where no current viable alternatives exist and documentation of evidence of significant potential losses; 3) significant producer involvement; 4) natural controls as partial or effective solutions to pest management problems; and 5) solutions capable of being rapidly brought to bear on critical problems. The goal of this program is to develop or identify alternatives for critical needs to insure that crop food producers have reliable methods of managing pest problems.

QUESTIONS SUBMITTED BY REPRESENTATIVE FAZIO

PM-10 RESEARCH

Question. The subcommittee approved \$873,000 for fiscal year 1997 through the CSREES budget for PM-10—research about particulate matter and air quality that is critical both to California and the rest of the nation. The need in our state is great but, unfortunately, this research money is currently being split between California and Washington State. Describe the nature of research going on at the institutions in both states and any other states under this research program, tell us how they complement one another, and what your proposal in the fiscal year 1998 budget is in this area?

Answer. As directed by Congress in establishing the PM-10, California and Washington special grant, the funding from CSREES is divided equally between the two states. Research both by the University of California at Davis, and Washington State University address serious public concerns related to particulate emissions and resulting effects on air quality and potential effects on human health. The overall objectives of both the California and Washington program is to determine the role of agricultural land and production and management practices as sources and causes of particulate emissions, and to develop alternative or improved practices to reduce these emissions. Because of quite different climatic and soils conditions and types of cropping systems and management practices, some specific research objectives differ quite distinctly between the two states' programs. However, a number of significant collaborative projects are being jointly conducted by California and Washington on PM-10 air quality problems that are critical to both states, and to other Western states.

The PM-10 research in California is centered around the intensive production of cotton, grain crops, and fruit and nut crops, such as almonds, figs, and other high-value crops. Production of these crops requires intensive tillage, cultivation, and harvesting operations which can create potential problems for dust or particulate

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emissions. Research by scientists at the University of California at Davis is developing sampling and monitoring programs to determine the source and extent of PM-10 particulates in these agricultural production areas, and are collaborating with Washington scientists on developing unique biological "fingerprinting" techniques to more precisely pinpoint the sources of origin. In addition, the California research is developing knowledge on the PM-10 emission-potential of various field crop operations to be used as a basis for developing new control methods for PM-10 emissions from California agriculture. In addition, the data from these studies have already been incorporated into San Joaquin Valley air authority implementation plans. Two computer models, CALMET and CALGRIO, developed by California scientists for urban air quality assessment, will be extended for region-wide assessment and planning of agricultural impacts on air quality in both California and Washington.

In Washington, the production of the major crops of dryland wheat and grain in low rainfall areas requires the extensive use of crop-fallow rotations to conserve soil moisture. This results in leaving large acreages of soils with no crop cover, with potential for periodic severe wind erosion and severe air pollution problems. Other PM-10 particulate emission problems are related to the practice of crop residue burning in grass seed production fields to control pests and permit efficient operation of planting equipment. Research by Washington State University and USDA scientists is developing new data on the sources of PM-10 emissions during wind events, and the sources of such emissions as a basis for effective and economic control practices. These studies include work with turners and scientists in Oregon and Idaho on alternative conservation or no-tillage cropping systems to increase water intake and reduce soil loss by wind, and to conserve crop or vegetative residue cover on soils susceptible to wind erosion. Washington scientists are also finalizing a wind erosion and dust emission prediction model adapted to the western U.S. This prediction tool along with a new Manual of Best Management Practices for reduction and control of PM-10 emissions is expected to be incorporated into recommended air authority state implementation plans in Washington, and subsequently in most other western states.

The PM-10 research in both California and Washington includes strong collaboration between federal and state scientists in other states with similar PM-10 concerns, and with other ongoing research that is complementary. For example, both states have cooperative wind erosion and PM-10 emissions research underway using specialized field dust samplers and laboratory wind tunnels, with federal and state scientists in Texas and Kansas who have extensive experience and laboratory.

Question. Do you intend to keep or alter the state distribution in the future—what would make you consider doing so?

Answer. The research in both California and Washington is providing information that may prevent agricultural losses and protect human health. However, in keeping with the Administration's policy of awarding research grants competitively, no other federal funding for this program as currently positioned is requested. Research could be continued at the state's discretion using formula funds, or the principal investigators could apply for the competitive grants program under the National Research Initiative.

PEST CONTAINMENT AND QUARANTINE FACILITY

Question. I was impressed by the emphasis in each of the testimonies by Undersecretary Woteki, Dr. Knipling, and Dr. Robinson about the fight against pests and the fight for integrated pest management and for food safety. The continuing emphasis on these technologies, bioengineered pest-resistant plants, and monitoring pesticide levels under the Food Quality Protection Act will have increasing importance in the years to come.

Those missions just happen to dovetail with the mission of the Pest Containment and Quarantine Facility at UC-Riverside and UC-Davis. We need about \$7 million to complete the federal share for this project. Although USDA traditionally does not request funds for these CSREES projects, I think you are aware of the value of this facility for exactly the priorities you have laid out in your testimony. Perhaps you could outline for the committee just how a facility like Riverside/Davis facility can complement some of the missions you have emphasized today.

Answer. Plant pest management, including pests such as insects, nematodes, bacteria, fungi, viruses and weeds, is in a state of transition. Traditional pest control strategies based on use of synthetic chemical pesticides are being phased out. This is due to several factors including: pest populations that have developed resistance to chemical pesticides; public pressure to avoid pesticide contamination of food and the environment; discovery that some pesticides thought to be safe may in fact be

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carcinogenic; and high costs of multiple pesticide applications. The most attractive alternative to synthetic chemicals is biological pest control. This strategy includes use of parasites; microorganisms; predators; and genetically-engineered insects, microorganisms, or resistant plants. Sophisticated biological pest control methods are made possible by the development in recent years of recombinant DNA technology, which allows cloning of genes and stable insertion of such genes into the insects or microorganisms. To assay the efficacy of exotic or genetically-engineered bio-control agents, quarantine and physical containment facilities may be needed to insure safety before field releases are made.

Question. How would USDA accomplish some of these missions without this facility—I understand that the containment level offered by the proposed Davis facility for this type research is available at very few installations throughout the U.S.?

Answer. Currently, there are a limited number of facilities with Biosafety level 3 capability available for biological control experimentation with recombinant germplasm and with exotic pests that can be used to undertake this research. The facilities at the University of California-Davis and the University of California-Riverside could significantly accelerate the efforts to develop new, innovative, and environmentally-compatible pest control technologies.

SUBCOMMITTEE RECESS

Senator COCHRAN. This concludes today's hearing. Our next hearing will be on Thursday, May 1, at 10 a.m., in room 124 of the Dirksen Senate Office Building. At that time we will hear from witnesses on the budget request for the Commodity Futures Trading Commission and the Food and Drug Administration. Until then, the subcommittee stands in recess.

[Whereupon, at 12 noon, Tuesday, April 22, the subcommittee was recessed, to reconvene at 10:08 a.m., Thursday, May 1.]

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AGRICULTURE, RURAL DEVELOPMENT, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1998

THURSDAY, MAY 1, 1997

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:08 a.m., in room SD-124, Dirksen Senate Office Building, Hon. Thad Cochran (chairman) presiding.
Present: Senators Cochran and Bumpers.

COMMODITY FUTURES TRADING COMMISSION

STATEMENT OF BROOKSLEY BORN, CHAIRPERSON

ACCOMPANIED BY MADGE BOLINGER, DIRECTOR, OFFICE OF FINANCIAL MANAGEMENT

OPENING REMARKS

Senator COCHRAN. The subcommittee will please come to order. Today we continue our hearings on the fiscal year 1998 budget submitted by the President. This morning we will consider the budget request for the Commodity Futures Trading Commission and the Food and Drug Administration. We are pleased to welcome the Chairman of the Commodity Futures Trading Commission, Brooksley Born. We invite you to come sit at the witness table with your assistant.

We will put your entire statement, which we have, in the record. We thank you for that and we encourage you to make any summary comments or remarks that you think would be helpful to the committee in understanding the budget request. Then we will have an opportunity to discuss the issues raised or ask questions.

You may proceed.

STATEMENT OF BROOKSLEY BORN

Ms. BORN. Thank you very much, Mr. Chairman.

The Commodity Futures Trading Commission very much appreciates this opportunity to discuss the President's fiscal year 1998 budget request for the Commission. With me today is Madge Bolinger, who is the Director of the Commission's Office of Financial Management.

The CFTC is a small agency with an important mission. It oversees the Nation's 11 futures and option exchanges and supervises 64,000 commodity professionals who trade on the floor of these ex-

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changes or represent customers. These markets are growing rapidly, having more than doubled in trading volume during the past decade.

The President's fiscal year 1998 budget request for the Commission is \$60,101,000, with a staffing level of 600. This request represents an increase of \$5 million and 20 staff persons over the fiscal year 1997 appropriation. About \$4 million of the request is required for the Commission to sustain its current level of services; \$1 million is to fund the requested 20 additional staff-years.

The Commission's tasks are to ensure the integrity of the U.S. futures and option markets, protect customers from fraud and other trading abuses, monitor the markets to detect and prevent price distortion and manipulation, and maintain the competitive strength of the Nation's exchanges.

The requested increase will be used to continue enhancement of the Commission's enforcement and surveillance programs and slightly to expand the Commission's industry oversight function. Approximately 75 percent of the requested dollar increase above the current level of services will be dedicated to enforcement efforts to increase our investigative activities, litigation support, and cooperative law enforcement efforts. The Commission's goal is to send a strong message that fraudulent activity and other violations of the Commodity Exchange Act will be promptly and thoroughly investigated and proceeded against vigorously.

The increase will also enhance the ability of the Commission to use its new integrated market surveillance system, which will assist Commission staff in monitoring systemic risk in the marketplace. This increase will also provide the resources to sustain the necessary level of oversight over the compliance programs of the Nation's futures and option exchanges and the National Futures Association.

The increase in funding and staffing is well justified and will benefit agricultural producers and processors, financial services firms, energy concerns, and many other sectors of the economy that depend on the important price-discovery and risk-shifting functions of the futures and option markets.

The Commission remains committed to the elimination of unnecessary regulatory burdens and is currently reviewing and amending its regulations to streamline them as appropriate in light of the Commission's mandate to protect the public interest.

The Commission is also committed to working with Congress to improve and update the Commodity Exchange Act through legislative amendments. Bills to amend the act have been introduced in Congress which would result in the pervasive deregulation of our futures and option markets and thus would pose grave dangers to the public interest. Our current regulatory system has allowed our futures markets to become the strongest and most respected in the world by convincing market participants from around the world that they are safe, fair, and transparent.

The Commission is strongly opposed to the provisions of the bills which would eliminate Government regulation of much of our exchange trading in futures and options and would leave those who use and rely on the integrity of our markets exposed and unpro-

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tected. Even if those provisions were enacted, the Commission's funding needs for fiscal year 1998 would not decrease.

The Commission recognizes that this subcommittee faces difficult appropriations decisions this year. Nonetheless, we believe that the increase that the President has requested for fiscal year 1998 is essential for the Commission to fulfill its congressional mandate and to keep pace with a growing, complex, and dynamic marketplace.

Thank you very much, Mr. Chairman. I would be happy to answer any questions that you or other members of the subcommittee may have.

PREPARED STATEMENT

Senator COCHRAN. Thank you very much, Ms. Born. We have your complete statement and it will be made part of the record.

[The statement follows:]

PREPARED STATEMENT OF BROOKSLEY BORN

Mr. Chairman and Members of the Subcommittee: I appreciate the opportunity to discuss with you the President's fiscal year 1998 budget request for the Commodity Futures Trading Commission ("CFTC" or "Commission").

CFTC'S BUDGET REQUEST

As you know, the President's fiscal year 1998 budget request for the Commission is \$60,101,000, with a staffing level of 600. This request represents an increase of \$5 million over the fiscal year 1997 appropriation. Approximately \$4 million of that request is required for the Commission to sustain its current services level, and \$1 million is to fund the requested 20 additional staff years.

The Commission recognizes that this Subcommittee and Congress face difficult fiscal decisions this year. Nonetheless, we believe that the increase the President has requested for fiscal 1998 is not only justified but essential if the Commission is to continue to strengthen its enforcement and market surveillance programs as well as to carry out its other statutory responsibilities fully and effectively.

OVERVIEW OF FUNDING LEVELS AND OPERATIONAL EFFECTS

The Commission enforces the requirements of the Commodity Exchange Act ("Act" or "CEA"). It is responsible for ensuring the integrity of the U.S. futures and option markets, protecting customers from fraud and other trading abuses, monitoring the markets to detect and to prevent price distortions and manipulation, and maintaining the competitive strength of the nation's exchanges. We continue to work to protect the vital economic functions of hedging and price discovery performed by our futures and option exchanges. Prices established by domestic futures exchanges affect what we pay at the grocery store, the service station, and copper plumbing and our lumber. Similarly, prices on the exchanges assist producers and processors in obtaining fair prices for their commodities.

The Commission oversees 64,000 commodity professionals who trade on the floor of the exchanges or represent customers. Our goal is to ensure that these firms and individuals meet standards of fitness and maintain financial integrity, use proper sales practices and provide adequate risk disclosures to their customers.

These responsibilities have become more challenging in the face of dramatic market growth and innovation. Examples of this growth and the great expansion of the Commission's oversight and regulatory responsibility include the following:

Increased exchange trading volume.—The CFTC supervises all trading of futures and option contracts on eleven U.S. futures exchanges. The commodity futures and option markets have experienced and continue to experience dramatic growth. They have expanded from agricultural markets to markets in futures and options on financial instruments, such as interest rates, stock indices and foreign currencies, and commodities of global significance, such as energy and metals. Exchange futures and option trading has more than doubled in the last decade (from 216 million to 495 million contracts)—an increase of 131 percent. This growth is expected to continue with a volume of 562 million contracts projected for 1998 (an increase of 160 percent over 1986). CFTC's programs have encouraged this healthy growth by

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assuring market participants around the world that our markets are safe, fair and transparent.

Growth of over-the-counter derivatives.—The CFTC, along with other financial regulators, exercises general oversight of the rapidly growing and evolving over-the-counter market in derivative instruments. It has responsibility to address fraud and manipulation in significant portions of that market. The CFTC also works with the international regulatory community to address disclosure and market integrity issues in the market. This enormous market, currently estimated to be in excess of \$50 trillion world-wide, has developed in the past decade.

Growing managed funds.—The CFTC regulates commodity pool operators and commodity trading advisors. Funds committed to professional management for futures trading have grown exponentially, from \$115 million in 1975 to over \$25 billion today, not counting hedge funds also registered as commodity pools. This area of financial investment includes a growing number of pension and mutual funds. The Commission has worked with industry groups and other regulators to improve and to simplify disclosure requirements which allow customers to make informed investment decisions.

Rapid innovation.—The CFTC approves all contracts traded on futures and option exchanges and all rules of such exchanges and the National Futures Association. Since 1986, the CFTC has approved over 400 new contracts for trading on exchanges. Many of these new, innovative contracts have brought new market users within CEA protection for the first time. The CFTC has worked closely with both the exchanges and industry representatives to make certain new contracts will create hedging opportunities and enhance price discovery and price basing of the underlying commodities.

Expanded Congressionally mandated responsibilities.—The CFTC's authority and responsibilities have grown substantially since the Commission was created in 1975. After three years of intense Congressional scrutiny, Congress passed the Futures Trading Practices Act of 1992 giving the CFTC a number of new responsibilities to ensure market integrity. Ongoing activities include enforcing the heightened audit trail standards for exchanges and improving the CFTC's oversight and enforcement programs. In 1995 Congress reaffirmed these obligations by adopting a reauthorization of the Commission, which authorized appropriations through fiscal year 2000.

Growing internationalization of the markets.—Financial and commodities markets are becoming increasingly global, further increasing the complexity of the CFTC's oversight responsibilities. The agency must respond promptly and effectively to international developments, such as the collapse of Barings Plc. and the issues surrounding Sumitomo Corporation's copper trading. The agency has ongoing responsibilities to ensure that its regulatory framework is capable of responding to the domestic implications of problems arising anywhere in the world. It has become a leader in encouraging international cooperation and improvement of regulation abroad.

Technology developments.—The exchanges, commodity professionals and users of the markets are turning to newly developed technology to cope with the huge growth in this industry. Likewise, the CFTC has had to augment its staff as well as its hardware and software to keep pace with the growth in the markets. Technology also presents some increasing regulatory challenges to the CFTC, including the need to police futures and option trading advice and sales offered illegally via the Internet.

CFTC RESOURCES

Despite its increasing responsibilities, the CFTC's budget remained essentially flat from fiscal year 1992 through fiscal year 1994. Consequently, the Commission reduced personnel, substantially cut non-staffing expenses, and delegated additional duties to self-regulatory organizations. The CFTC also deferred computer upgrades and systems development for important market surveillance and other activities. In short, the Commission and its staff were stretched very thin, and it became extremely difficult to provide the oversight and enforcement presence on which market users and the economy at large depend.

Over the past three years, the Administration and Congress have recognized the need for a stronger CFTC and have provided for an increase in staffing, particularly in enforcement personnel. The budgetary support of the agency in recent years has reflected the recognition of the critical need to supervise the futures and option markets effectively and to enforce the laws against fraud and manipulation in those markets.

In fiscal year 1998, the requested increase will be used to continue enhancing the Commission's enforcement and surveillance programs and slightly to expand its in-

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dustry oversight activities. Approximately 75 percent of the program increase will be dedicated to enforcement activities to increase its investigative activities, litigation support and cooperative law enforcement efforts.

Additional funding will also allow the Commission to continue the efforts started in fiscal year 1996 to redesign and implement an integrated market surveillance system which will assist Commission staff in monitoring systemic risks in the marketplace. One of the major enhancements of the system will be the ability to obtain and analyze daily option large trader data along with daily futures large trader data. Currently, we receive futures large trader data daily, but options data is only available on a weekly basis. The system will reduce the overall reporting burden of certain commodity professionals, who will report large trader data only to the CFTC rather than to multiple exchanges.

This increase will also provide the resources to sustain the necessary level of oversight over the compliance programs of the futures and option exchanges and the National Futures Association.

The President's fiscal year 1998 budget request will increase the Commission's staffing level by about 3 percent. This slight increase would restore some of the erosion in staffing in the early 1990's and would put the CFTC at an authorized staffing level 3 percent lower than its fiscal year 1992 authorized staffing level.

The requested increase in funding and staffing is well justified and will benefit agricultural producers and processors, financial services firms, energy concerns and many other sectors of the economy that depend on the price discovery and risk-shifting functions of futures and option markets.

HIGHLIGHTS OF FISCAL YEAR 1996

ENFORCEMENT

As mentioned earlier, the majority of the budgetary increases that the Commission has received since fiscal year 1995 have been for the enforcement program. In fiscal year 1995, the Commission began restructuring and enhancing its Division of Enforcement, and that effort continues today. A strong, effective enforcement program is one of the Commission's top priorities. Our goal is to send a strong message that fraudulent activity and other violations of the CEA will be promptly and thoroughly investigated and proceeded against vigorously. As a result of the Commission's civil injunctive actions in fiscal year 1996, approximately \$6.4 million in customer funds and other assets were placed under the protection of receivership.

Case Highlights

During fiscal year 1996, resources were devoted to significant cases which not only addressed the specific wrongdoing alleged in a particular complaint, but also communicated to the public the Commission's concern with a specific area or highlighted the Commission's view regarding the significance of acts and practices that have the potential to cause significant harm to markets, customers, and market participants. Those cases include the following:

- The filing and simultaneous settlement of an administrative action against Deloitte & Touche and one of its former partners. The Commission's order found that the partner failed to conduct an audit of a futures commission merchant ("FCM") in accordance with generally accepted auditing standards and failed to investigate properly and to report on material inadequacies in the FCM's internal controls. Deloitte was held liable for the partner's violations. Deloitte agreed to pay a \$100,000 civil penalty and to comply with certain undertakings. The partner agreed to the entry of a cease and desist order and a Commission censure. *In re Deloitte & Touche*, CFTC Docket No. 96-10 (filed September 26, 1996).
- The filing and simultaneous settlement of an administrative action against Fenchurch Capital Management, Ltd. The Commission's order found that Fenchurch attempted to manipulate and did manipulate the value of its position in ten-year U.S. Treasury note futures contracts by cornering the available supply of the cheapest-to-deliver notes. According to the Commission's order, Fenchurch increased its position in the issue through a series of repurchase transactions at a time when the notes were in tight supply. Fenchurch exacerbated the tightness in the supply of the cheapest-to-deliver notes by increasing its position and intentionally withholding the notes from the market. Fenchurch's conduct took place after expiration of trading on the futures contract, while those holding short positions in the market were preparing to make delivery. The Commission's action and its underlying investigation were coordinated with the Securities and Exchange Commission ("SEC") and the Chicago Board of Trade ("CBT"), both of which filed related charges. The Federal Re-

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serve Bank of New York also assisted the Division in its investigation. In settling the CFTC's action, Fenchurch consented to the entry of a cease and desist order and to various undertakings related to its Treasury market trading. Fenchurch also agreed to conduct a review of its policies and procedures and, if necessary, to formulate and to implement reforms of those policies and procedures. Fenchurch agreed to pay a civil monetary penalty of \$600,000, which also satisfied Fenchurch's obligations under the SEC's consent order of permanent injunction. *In re Fenchurch Capital Management, Ltd.* [Current Transfer Binder] Comm. Fut. L. Rep. (CCH) ¶26,747 (CFTC July 10, 1996).

Also, resources were devoted to enhance a "quick strike" enforcement response capability. This effort has resulted in instituting injunctive actions within weeks, or even days, of discovering suspected illegal activity. To date, examples of notable cases brought by the Commission using this new capability include the following:

—The filing of an injunctive complaint against Donald Chancey and a firm controlled by him alleging violations of the anti-fraud and registration provisions of the CEA and Commission regulations in connection with an unregistered commodity pool operator. According to the complaint, the defendants solicited individuals to invest in a pool by making misrepresentations that the funds would be invested in silver futures and that the past trading of the pool had been profitable. The complaint alleges that the defendants placed few actual trades and that those resulted in losses. The defendants allegedly used some of the funds solicited to pay purported interest to certain earlier investors and converted the majority of the funds to their own use. The day the complaint was filed, the federal district court entered an ex parte order freezing the defendants' assets and protecting and granting the Commission access to books and records. The court also appointed a temporary equity receiver. The Division used the Internet to inform the public about this enforcement action and to solicit information concerning the whereabouts of Chancey, who disappeared before the Commission filed its action against him. The Division posted a picture of the defendant on its home page and later posted notices publicizing the court sanctioned auction of the defendants' property. *CFTC v. Donald B. Chancey, et al.* No. 7:96-CV-61 (M.D. Ga. filed July 1, 1996).

—An injunctive action filed against Ken Willey. Willey allegedly defrauded pool participants by distributing account statements which misrepresented the changes in net asset value and income and loss realized by individual participants. According to the complaint, the defendant illegally received investor funds in a name other than that of a commodity pool and commingled pool property with assets of other persons. The day the complaint was filed, the federal district court entered a consent order of preliminary injunction freezing Willey's assets, protecting and granting Commission access to books and records, and enjoining future violations of the nature alleged. Subsequently, the court entered an order finding Willey in contempt and ordering him jailed until he complied with the preliminary injunction. After six months of incarceration, Willey was released from jail without ever complying with the order to produce books and records. In the interim a receiver was appointed, and a motion for summary judgment was filed by the Commission on all counts except fraud. The Commission is awaiting the outcome of the summary judgment motion and a distribution of assets to investors by the receiver. *CFTC v. Ken Willey*, Civ. No. 96-0200 (E.D. Wash. filed April 19, 1996).

FRAUD IN FOREIGN CURRENCY FUTURES AND OPTIONS

An important part of the Commission's Enforcement program in recent years has focused on the fraudulent off-exchange sales of foreign currency futures and option contracts to the public. These cases typically involve boiler room operations that seek to lure in the vulnerable through high-pressure sales tactics and false promises of quick riches. In recent years, we have seen a rise in cases of "affinity fraud," in which members of particular ethnic or religious groups are targeted as victims of the fraudulent activity.

The Commission has brought 19 cases involving the illegal sale of foreign currency futures or option contracts to the general public since 1990. In those cases, more than 3,200 customers invested over \$250 million in foreign currency schemes, much of which was lost.

One of these cases, *Dunn v. CFTC*, U.S. (1997), *rev'g* 58 F.3d 50 (2d Cir. 1995), was decided by the Supreme Court in February of this year. In that case the Commission alleged that the defendants had solicited and accepted funds from approximately 400 customers and that Dunn had informed customers that they had suffered losses of at least \$95 million at the time the defendants ceased operations. The

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Supreme Court decided the narrow issue of whether futures and options are treated the same under the so-called Treasury Amendment, which exempts from the CEA some transactions in foreign currencies that would otherwise be covered by the CFTC's jurisdiction. The Court concluded that options are treated in the same manner as futures under the Treasury Amendment.

Our enforcement experience demonstrates that fraud of the retail public is rampant in this area and will require a strong enforcement presence for the foreseeable future. The Commission strongly believes that, whether through judicial interpretation of the existing statutory provisions or through the legislative initiatives now pending before both Houses of Congress, its authority vigorously to pursue the investigation and prosecution of foreign currency futures and option scams targeted at public customers should be affirmed.

EXCHANGE CONTRACT DESIGNATION

In fiscal year 1996, the Commission approved 92 new futures and option contracts—an approval rate of one every 2.7 work days. Many of the innovative new contracts approved by the Commission were designed to meet specialized hedging needs of firms in the agricultural sector. For example, the Commission approved five CBT corn yield insurance futures contracts based on the states of Illinois, Indiana, Nebraska and Ohio as well as the U.S. as a whole. These contracts were designed to provide a vehicle for crop insurance companies and other commercial and agricultural entities to hedge financial risk related to fluctuations in the yields of corn.

Early in fiscal year 1997, the Commission proposed rules for new “fast-track” procedures for processing exchanges’ contract designation applications and rule changes. Those rules were adopted by the Commission on February 27, 1997. Under the rules, certain contract applications may be approved within 10 days following receipt by the Commission, while other contracts may be approved within 45 days. Most exchange rules will go into effect within 10 days after they are filed with the Commission.

HEDGE-TO-ARRIVE CONTRACTS

Recently, a number of agricultural producers have used various grain contracts referred to as hedge-to-arrive (“HTA”) contracts. High grain prices experienced in fiscal year 1996 and the “rolling forward” of these contracts created financial strains on some grain elevators and producers. As a result, on May 15, 1996, the Commission’s Division of Economic Analysis released statements of policy and guidance regarding HTA contracts. In the first statement the Division stated that it would not base a determination of the legality of any such contracts existing as of May 15, 1996, under the forward contract exclusion of the CEA solely on the fact that the parties entered into a subsequent agreement to use cash payments to unwind these contracts. The second statement provided guidance regarding the risk implications of particular features of these contracts. On November 13, 1996, the Commission filed three administrative complaints involving HTA contracts, which are currently pending before the CFTC’s administrative law judges.

MARKET OVERSIGHT

The CFTC’s mandate requires it to oversee the activities of futures and option exchanges, the National Futures Association (“NFA”), an industry self-regulatory organization, and commodity professionals. These oversight activities are designed to protect customer funds, to prevent trading and sales practice abuses, and to ensure the financial integrity of regulated firms. The CFTC’s ongoing oversight activities include the following: financial and sales practice audits; rule enforcement reviews; trade practice investigations; review of margin, clearance and settlement rules; and activities ensuring that firms carrying customer funds are adequately capitalized and have properly segregated customer funds from firm funds.

EXCHANGE AUDIT TRAIL STANDARDS

The Commission has devoted considerable effort to encouraging compliance with the enhanced exchange audit trail standards that became effective in October 1995 for high volume exchanges. The enhanced audit trail standards, which were mandated by the Futures Trading Practices Act of 1992, require these exchanges to demonstrate that their trade records are unalterable, continuous, independently timed, and properly sequenced to the extent practicable. In late 1994 and early 1995, the Commission tested each high volume exchange’s audit trail system and provided recommendations for system improvements. The exchanges were informed that adoption of the recommendations would place them within a “safe harbor” for good

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faith efforts to comply with the enhanced standard. Two of the four exchanges tested adopted all of the recommendations, and the Commission determined that they are in the safe harbor. In fiscal year 1996, the Commission staff re-tested the audit trail systems of the other two exchanges, the Chicago Mercantile Exchange (CME) and the CBT, to determine whether they were in compliance with the heightened standards.

On August 12, 1996, the Commission issued a report which addressed exchange compliance with the heightened audit trail standards. The report outlines further steps to be taken by the exchanges and the Commission to assure future compliance and to address pending exchange dual trading petitions. The Commission has been proceeding with the plan set forth in the report to address those petitions.

The Commission has recently re-tested the Comex Division of the New York Mercantile Exchange and is currently testing the New York Cotton Exchange (NYCE). NYCE recently qualified as a large-volume exchange subject to the heightened audit trail standards under the Act.

THE CLOSE OF CBT'S MARCH WHEAT FUTURES CONTRACT

On March 20, 1996, in the final few minutes of trading on the CBT March 1996 wheat futures contract, the price rose an unprecedented \$2.30 per bushel to \$7.50. Regulatory reviews of the March wheat expiration were conducted by CFTC and CBT staff, which reviewed records and conducted interviews to determine whether the CBT properly enforced its rules and whether any violations of the CEA may have occurred. On November 26 1996, the Commission made public a staff report which included a detailed analysis of the matter. Based on the report, the Commission instituted a review of the adequacy of six disciplinary actions initiated and settled by the CBT and made a number of recommendations to the CBT to improve its procedures which is still ongoing.

CHICAGO BOARD OF TRADE DELIVERY POINTS

On December 18, 1996, the Commission notified the CBT that, in the Commission's view, its corn and soybean contracts no longer met requirements under Section 5a(a)10 of the CEA of providing delivery terms which "tend to prevent or diminish price manipulation, market congestion, or the abnormal movement of such commodity in interstate commerce." This action was prompted by the failure of the CBT to respond to changes in the cash grain markets, including a number of warehouse closings at its primary delivery point in Chicago. During 1995 the delivery capacity in Chicago was reduced by about 50 percent as three of the six regular elevators at that location ceased normal operations. In late 1996 a fourth warehouse announced intentions to cease operation. Nevertheless, in October 1996, the CBT membership rejected proposals of CBT's Board to expand delivery capacity under the futures contracts. Problems in the expiration of CBT's 1996 grain futures contracts (other than March 1996) were avoided only as a result of intensive monitoring of the markets by the CFTC and the CBT.

Following the requirements of the CEA, the CBT had until March 4, 1997, to adopt and submit contract amendments to correct the deficiency. The CBT has formed a task force to formulate contract changes. This task force made recommendations to the Exchange's executive committee on March 3, 1997, and on March 4 those recommendations were approved by the entire Board for submission to CBT's membership. The CBT membership voted on those recommendations on April 15, 1997, and approved the changes by a 2-1 margin. In addition, CFTC published the highlights of the CBT's proposal in the Federal Register and has requested public comments on the proposal. CBT made a formal submission to CFTC on April 17, 1997, for approval.

The Commission's December 18, 1996 letter also requested the CBT to review the terms of its wheat contract and to report back to the Exchange by April 18 (120 days). We understand that this matter is also under study at the CBT.

INTERNATIONAL ACTIVITIES

The Commission continued its coordination and cooperation with foreign regulators during fiscal year 1996. Major international activities of the Commission included the following:

—Coordination and cooperation with foreign regulators concerning Sumitomo Corporation's copper trading.

Co-sponsorship of a conference with Japan's Ministry of International Trade and Industry (MITI) and the U.K. Securities and Investment Board (SIB) on November 25-26, 1996, concerning regulatory issues posed by commodity futures markets. Seventeen countries responsible for the supervision of the world's leading commodity fu-

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tures markets issued the London Communiqué at the conclusion of the conference. The Communiqué sets out the proposal of the authorities to strengthen the supervision of these markets world-wide, particularly in the areas of the contract design, market surveillance including large trader reporting mechanisms, and information sharing. The CFTC is actively engaged in the work program the authorities agreed to undertake to accomplish that goal.

- Active participation in the International Organization of Securities Commissions' ("IOSCO") Technical Committee and its Working Parties.
- The conduct of the CFTC's sixth annual training seminar for foreign futures regulators, covering the operation of U.S. futures markets and the U.S. regulatory system governing futures trading. This seminar brought together 79 participants from 29 foreign nations.
- The adoption of a multilateral understanding, Declaration on Cooperation and Supervision of International Futures Exchanges and Clearing Organizations ("Declaration"), by eighteen international futures regulators as a result of a joint CFTC-SIB initiative.
- The execution of a Memorandum of Understanding with New Zealand on September 19, 1996, concerning consultation and mutual assistance in the exchange of information in connection with enforcement matters.
- Continued information sharing and cooperation with foreign authorities. In fiscal year 1996, the CFTC made over 50 requests for assistance to 38 foreign authorities. The CFTC also responded to over 55 requests for information from more than 25 foreign authorities.

REGULATORY COORDINATION AND REFORM

Regulatory coordination and reform remain an important part of the CFTC's agenda. The CFTC is a member of the President's Working Group on Financial Markets along with the Treasury Department, the SEC, and the Federal Reserve Board of Governors. The Working Group continues to meet regularly to coordinate regulatory policy. The CFTC also works closely with other agencies, including the U.S. Departments of Agriculture and Energy.

The Commission is committed to the elimination of unnecessary regulatory burdens and is currently reviewing its regulations to streamline them as appropriate in light of the Commission's mandate to protect the public interest in our futures and option markets. The new fast-track approval procedures adopted last week and described above are part of this effort.

PENDING LEGISLATION

Bills to amend the CEA have been introduced in Congress, S. 257 and H.R. 467. In testimony before the Senate Committee on Agriculture, Nutrition and Forestry on S. 257, the Commission presented its view that the bill would result in the pervasive deregulation of our futures and option markets and thus would pose grave dangers to the public interest. The changes included in the bill would radically alter the regulatory system that has allowed our futures exchanges to become the strongest and most respected in the world and would leave those who use and rely on the integrity of those markets exposed and unprotected. For these reasons, the Commission strongly opposes the provisions of the bill which would eliminate federal oversight and regulation of futures and option exchange trading.

The CFTC was created in 1975 because Congress recognized the need for an expert, independent agency to protect the important national interests that are served by futures and option markets and to ensure market integrity through oversight of the exchanges and the thousands of intermediaries who invest individual, pension and corporate funds in these markets. The price-discovery and risk-shifting functions of these markets, long utilized by agricultural producers and processors, are now essential to the economic well-being of many sectors of the U.S. economy. While the safety and integrity of the futures markets are as important as ever to agricultural processors, producers, and consumers, they are now equally important to financial institutions, multinational corporations, mutual fund advisors and participants in the cash markets for energy, metals and many other products. These bills would adversely affect the safety and integrity of our markets.

We do not yet know whether the outcome of the legislative process will result in any significant changes in the Commission's mandate. Any major changes in its legislative authority would likely take a period of time to implement. As to fiscal year 1998, the Commission believes the demands on its resources would actually be greater if the legislation were to pass since many rule changes and other Commission actions would be necessary to implement the more significant proposals in the draft legislation. Furthermore, a major shift in emphasis and resources from market

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oversight and supervision of regulated persons to enforcement activities would likely be necessary.

The Commission recognizes the need to ensure that the CEA adapts to changes in the market place and thus continues to provide an effective level of regulation and public protection. We are committed to working with Congress to improve the Act through legislative amendments.

CONCLUSION

The CFTC is committed to building on the achievements of the last several years to fulfill its Congressional mandate and to keep pace with a complex, dynamic marketplace. To accomplish this goal and to make essential improvements to our enforcement, surveillance and oversight programs, the Commission requires the proposed increase in its fiscal year 1998 appropriation. This increase will enable the Commission to heighten its surveillance of major market centers and to ensure that its surveillance system upgrade stays on schedule. It will sustain the necessary level of oversight over the compliance programs of the exchanges and the NFA. Additional funding also will enable the Commission's enforcement program to respond more quickly to fraud, manipulation and other wrongdoing in the marketplace, to provide a greater level of customer protection and better to promote market integrity.

Thank you, Mr. Chairman. I would be happy to respond to any questions.

PROPOSED LEGISLATION TO DEREGULATE MARKETS

Senator COCHRAN. Ms. Born, the legislation that you mentioned being considered by the Senate Agriculture Committee now for reforms in the law authorizing the CFTC's regulatory powers, if enacted, you say would not have any effect on your budget needs for the fiscal year. Did I understand that correctly?

Ms. BORN. For fiscal year 1998, I believe that is correct. It would have a long-term impact on the Commission's operations. In the short term, we feel that the need for rule changes and alteration of the methods of policing these markets would require the same amount of appropriations.

In the long term, we would need to shift all of our activities or most of our activities from our current oversight and surveillance activities that are designed to deter and to detect manipulation and fraud before they occur, and have to shift our resources and emphasis to enforcement, since we would no longer have the ability to detect these activities early on and to deter them.

TRADING ACTIVITY

Senator COCHRAN. There has been, I am told, a good bit of shift and change at the Board of Trade in Chicago and at the Merc in terms of business going elsewhere or people trading bypassing these exchanges. What affect, if any, does that trend have on your budget needs?

Ms. BORN. Well, in fact last year, 1996, was the biggest year CBOT ever had. It had its highest trading volume and it had an increase in its profits of 26 percent. Overall last year, 1996, was the second largest trading volume for all of our exchanges put together.

We do not see any significant falloff in the trading volume or activity on these markets. Almost 500 million contracts were traded last year.

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PROPOSAL TO ALTER DELIVERY SPECIFICATIONS FOR CORN AND SOYBEAN FUTURES CONTRACTS

Senator COCHRAN. The supplemental which we are considering now in the Senate, and the House as well, contains some language regarding the Chicago Board of Trade's proposal to alter the delivery provisions of its corn and soybean futures contracts which was put in on the House side, and we have language that was approved by our committee yesterday on this subject, too. I would like to have your comments about it just for clarification.

You have indicated to us that the House language would conflict with the Commission's statutory obligation to approve or initiate disapproval proceedings with respect to the Chicago Board of Trade's rule amendments within 180 days of their submission. Could you explain to us what the problem is and do we need to address that in legislation?

Ms. BORN. I do not think any legislative action is needed on this issue. Let me explain what the current situation is.

The Commission notified the Chicago Board of Trade in December 1996 that its corn and soybean contracts no longer met the provisions of the act with respect to delivery under section 5a(a)(10) of the act in that they did not tend to prevent or diminish the likelihood of manipulation or price distortion. This was because Chicago was a primary delivery point, and four out of the six remaining grain elevators in Chicago had closed down last year, leaving virtually no delivery capacity there.

That started a statutory procedure under section 5a(a)(10) that gave the Chicago Board of Trade 75 days to make a proposal to the Commission to amend the delivery provisions. They made that proposal on the 16th of April, and we currently have that out for public comment through the 15th or 16th of June.

The Commission's statutory obligation at this point is to determine whether the new proposal meets the delivery requirements of the act. If it does, we would then approve it. If it does not, we would have the statutory responsibility and authority to amend it or supplement it to impose appropriate delivery standards.

The House Appropriations Committee report language recommended that we delay action until a GAO study goes into effect. The problem that we have with that language is that, within 180 days of the submission to us by CBOT on April 16, if we have not acted to approve, disapprove, or amend, as is our statutory responsibility, CBOT's proposal might go into effect automatically and we might lose all statutory oversight power at that point.

We believe that the Appropriations Committee put that language in the report not realizing that the likely implications of the language was that the CBOT proposal would go into effect, because I think that the motivation for that language was a concern about the CBOT proposal.

Senator COCHRAN. That language is in the House report. The Senate yesterday included language in its report which reflects the fact that the Commission has solicited public comment on the Chicago Board of Trade's proposal and indicates that, after consideration of public comments and using appropriate criteria, the Commission should complete the process and make a decision.

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So you would prefer, as I understand it then, the Senate report language? When we get to conference we will have an opportunity to discuss this and in our statement of managers we can express the sense of Congress on this subject. We should, since there are conflicting provisions now between the House and Senate reports.

Ms. BORN. I have not seen the specific language that you just referred to, but from your description it sounds as though it would be more consistent with our statutory obligations under the act and what we would prefer to do.

Senator COCHRAN. Let me read it so we are sure that the record is correct here on what our committee report says:

The committee is aware that the Commodity Futures Trading Commission has solicited public comment on the Chicago Board of Trade's proposal to amend its delivery specifications for corn and soybeans. The provisions of the Commission Exchange Act require futures delivery points that "will tend to prevent or diminish price manipulation, market congestion, or the abnormal movement of such commodity in interstate commerce." Giving due regard to public comments received and using the appropriate criteria, the Commission should complete the process and render a decision after taking into account the analysis available to it.

Ms. BORN. That seems completely acceptable and appropriate, Mr. Chairman.

Senator COCHRAN. Thank you very much.

Senator Bumpers.

STATEMENT OF SENATOR BUMPERS

Senator BUMPERS. Mr. Chairman, I must confess that this whole issue is immensely complex to me.

Senator COCHRAN. Yes, it is. It is enough to give us all a headache.

Senator BUMPERS. I visited Ms. Born and I visited with people on the other side of the issue, and I do not understand the Board of Trade's proposal on contract delivery proposal on corn and soybeans. I will do my very best to educate myself before I have to deal with it if I do have to deal with it.

But let me ask you this. Have you testified before the Senate Agriculture Committee on the bill? I guess it is on reauthorization, is it not?

Ms. BORN. It is not on reauthorization, Senator Bumpers. It is on amendments to the CEA.

Senator BUMPERS. Does it include corn and soybeans?

Ms. BORN. It does not.

Senator BUMPERS. That is not a part of it?

Ms. BORN. No; the Commission is reauthorized until the year 2000. I did testify on S. 257, which would amend the Commodity Exchange Act, in February before the Senate Agriculture Committee.

PROPOSED PROFESSIONAL MARKETS EXEMPTION

Senator BUMPERS. What is it that the so-called Harkin-something bill does? What does it do?

Ms. BORN. Well, it does a number of things. It is a very broad-reaching bill. The provision that most directly deals with exchange trading, as opposed to over-the-counter trading in derivatives, is called the professional markets exemption, which would exempt

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from Federal oversight and regulation any futures exchange which chose to restrict trading on the exchange to business entities with \$1 million or more of net worth.

The exchanges have said that at least 90 percent of their current trading volume is on behalf of such eligible entities, and therefore with very simple rule changes they would be able to eliminate Federal oversight of those markets.

Under the Senate bill, the Commission would still have the ability to bring enforcement actions after the fact for fraud and manipulation. We would, however, lose all the requirements for record-keeping and reporting by the exchanges. There would be no standards for their contracts like these delivery provisions. There would be no audit trail requirements. There would be no standards for their rules or for their governance.

Also, if the commodity professionals we regulate, of which there are 64,000, chose to deal solely on the exempted exchanges, we would lose all oversight power over those people. They would no longer have to register. There would not be any fitness standards. There would not be any net capital requirements or other financial integrity standards.

So, in effect, we would lose the current ability we have to detect and prevent manipulation and fraud in these markets, although once manipulation and fraud, in fact, occurred we would be able to start an enforcement investigation and bring a suit against that. However, up until now, for the last 70 years the major thrust of futures and option regulation has been on prevention and detection of these abuses, rather than allowing the abuses to go ahead and occur, because of the enormous disruption to our economy that that might involve.

Senator BUMPERS. The Chicago exchanges say that they have grown 10 percent over the last several years and their competitors have grown 500 percent, and they attribute that to the fact that they have to comply with literally dozens or hundreds of onerous, unnecessary regulations of the CFTC. And they think it is time to eliminate a lot of that.

As you said, right now I assume any new trading that they devise, that they want to do, they have to get your approval on, do they not?

Ms. BORN. That is right, and we have a fast track approval where—

Senator BUMPERS. How fast?

Ms. BORN. Ten days for cash-settled contracts that are not agricultural. For agricultural contracts or for physical delivery contracts, like a copper contract that required physical delivery, we have a 45-day time period because we put that out for public comment so that the industry, the commercial interests that rely on these markets, the agriculture producers and processors, the copper industry, will have an opportunity to comment publicly about how this would impact on their marketplace.

Senator BUMPERS. How does Cargill and Archer Daniel and people like that feel about the Harkin bill? Do you know?

Ms. BORN. A number of the agricultural groups, including specifically Cargill, but a number of the agricultural trade organizations

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as well, have come out and expressed grave concern about the professional markets exemption.

Senator BUMPERS. Thank you, Mr. Chairman.

CFTC ENFORCEMENT ACTIVITIES AND STAFFING

Senator COCHRAN. Thank you, Senator.

Ms. Born, we noticed that the budget request is \$5 million over the level of this current fiscal year. Your testimony indicates that \$4 million of that would be to allow the CFTC to sustain its current services level and \$1 million is requested to fund 20 additional staff-years. We have tried over the years to add funds as needed for enforcement activities and your testimony indicates that 75 percent of the program increase requested for 1998 will be dedicated to enforcement activities.

I am wondering whether the funds that we have previously been adding to the budget for enforcement activities have been used to add staff resources in the enforcement area over the last 3 years? And I am curious to know what new enhancements are proposed with the funds that you say will be needed this year, for this next fiscal year.

Ms. BORN. We have had about a 10-percent increase in our enforcement onboard staff between fiscal year 1995 and fiscal year 1996. We currently have about 157 people onboard in enforcement, and we are authorized to have 169 people. There are hiring processes under way to hire the other 12—that is, we are recruiting and interviewing people for those positions.

In terms of the future use of this additional funding, of the 20 people who would be hired 10 would be new enforcement personnel, one would be an additional person for the Office of General Counsel to assist the Commission in the additional adjudicatory proceedings that our beefing up of the enforcement activities has generated, and one would be for the Office of Proceedings, which is our adjudicatory process, staffing again required because of the increase in the enforcement activities of the Commission.

That means that 60 percent of the new staffing we are requesting is enforcement related. The funds relating to those 12 positions happen to represent 75 percent of the additional \$1 million in programmatic increase, because the enforcement-related people would be paid more highly than some of the other people we are hiring.

INCREASED EFFECTIVENESS OF CFTC'S ENFORCEMENT DIVISION

Senator COCHRAN. We notice that part of the reason for the additional funding is to continue the restructuring and effectiveness of the Enforcement Division. Has that been the result? Have you been able to draw a conclusion as to whether effectiveness has been increased as a result of these new expenditures?

Ms. BORN. In my view it has been very greatly increased. There has been a complete reorganization of our Enforcement Division. We have a new Director of Enforcement. He has been onboard for a year and a half now. We also have new heads of the enforcement activities in our three major regional offices, Chicago, New York, and Los Angeles.

There has been an enormous enhancement of the ability of the Enforcement Division to deal with extremely complex financial

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fraud activities, which are a major part of our enforcement activities at this point. There has also been a great enhancement of the ability to have very quick strike force ability. A number of our cases are frauds where money is being siphoned offshore or otherwise secreted, and it is terribly important for our enforcement staff to be able to quickly investigate a matter, institute an injunctive proceeding in a Federal district court, and obtain an immediate temporary restraining order and then a preliminary injunction freezing the assets and freezing the availability of books and records and other documents.

OFFICE SPACE LEASING COSTS

Senator COCHRAN. One thing that stands out in the budget request is the increase for the Commission's office space leasing costs. Compared to this year's level, the next fiscal year will require \$1.592 million more to pay those costs. What is the reason for that?

Ms. BORN. Fiscal year 1998 will be the third year of our lease on our Washington space. We were required to move our offices 2 years ago into a new building and were very lucky to be able to negotiate leasehold improvement funds that could be applied against our rent for the first 2 years to the extent that we did not expend them in leasehold improvements.

Because of prudent management by my predecessors, a great deal of money was saved, and therefore we got substantial rebates against the first 2 years of the rent. Next year will be the first year that we will have to pay the full amount. We have run out of our leasehold improvement funds.

TECHNOLOGY INVESTMENTS

Senator COCHRAN. Technology investments are another item you discuss in the submitted testimony. There are increases reported for enhancements of the system. What are these enhancements and are they necessary to maintain current service levels, or are you trying to keep pace with the growth in the markets? For what reason are these investments necessary?

Ms. BORN. The amount that is an increase is an amount that is just to continue our ordinary activities. It is for computer processing and programming services that we ordinarily need, but were able to obligate in fiscal year 1996, and therefore they appear as an increase for fiscal year 1998, but are in fact a continuation of our ordinary level of costs.

Let me just ask Madge Bolinger if that is correct.

Ms. BOLINGER. That is correct.

Ms. BORN. So while we have expended or will expend approximately that same amount this year for our ongoing computer programming and processing services, we were able to obligate that money in fiscal year 1996 and therefore did not have to use this year's funds to do that.

RISK MANAGEMENT EDUCATION

Senator COCHRAN. The Department of Agriculture, according to the Secretary of Agriculture, has begun a new effort to teach farm-

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ers how to use new types of crop insurance and agricultural futures and options to help manage risks. Is the Commission involved in this in any way, and, if so, could you tell us what part you are playing in this new effort?

Ms. BORN. Certainly we have been actively involved with the Agriculture Department in this effort. Section 192 of the FAIR Act called on the Secretary of Agriculture to provide risk management education opportunities to agricultural producers because of their increasing needs for risk management as Government price supports diminish. That same provision states that the CFTC would cooperate with the Secretary of Agriculture in his design and implementation of this program.

That is now well under way under the Agriculture Department's leadership. We are part of a group that the Agriculture Department has put together to design and implement an educational program, and there is going to be a summit meeting with various groups who we hope will play an active role in the teaching process in September.

Commissioner Joseph Dial of our office has been appointed by me to be the liaison to that group and is our point person on this effort. We feel it is very important.

COMPETITIVENESS OF U.S. EXCHANGES

Senator COCHRAN. There is, I am told, concern among the exchanges that, in spite of your statements about the growth in the markets over the last decade and the volume of trading that occurred on the exchanges in this last year, that they are losing ground to foreign and over-the-counter markets, and that some of this may be due to the burden of the regulatory restraints that are imposed on the exchanges by the CFTC.

What is your reaction to this? Is overregulation a reason that U.S. exchanges claim they are losing market share to overseas exchanges and are those claims correct?

Ms. BORN. We do not believe so. At Congress' request in the 1992 amendments to our act, our staff conducted a study in 1994 of competitiveness between U.S. and foreign exchanges, which concluded that regulatory differences did not put our exchanges at a competitive disadvantage.

That study was recently updated in a summary way by our staff, and I would be happy to provide those reports to members of this subcommittee.

But let me say beyond that that the Commission is committed to streamlining our regulation to the extent possible consistent with protecting the public interest. The Commission has only been up to full strength, all five members, since last September, after several years of not having a full complement. Currently all five Commissioners are very committed to reducing unnecessary regulatory burdens. We have taken a number of steps already in amending our rules that we think streamline the regulation and modernize it, and are currently working with the exchanges to find other areas in which the regulatory burdens can be reduced.

We clearly feel that healthy, competitive markets in the United States are very much in the public interest and very important.

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PROPOSED PROMARKET EXEMPTION

Senator COCHRAN. My concluding question is on the subject of the promarket exemption in the reform legislation, or the deregulation proposal, that is pending here in the Senate. You have expressed opposition to this provision, which would exempt professional markets from regulation. Would you tell us why you think that exemption should not be approved by the Congress? Would it really impair the integrity and security of the futures markets?

Ms. BORN. We believe that it would. It would eliminate all the Federal standards under which these markets have been operating since the 1920's. Because more than 90 percent of the current volume of trading is represented by the eligible entities for a professional market, we believe that the exchanges would adopt professional markets in a broad-based way and suggest that small traders enter the markets only through commodity pools and mutual funds and otherwise.

So we think that the provisions would have very broad effects. They would eliminate such things as the requirements of competitive trading, open pricing, large trader reports, which the Commission uses to determine who the large players in the market are and whether their activities in the markets are explainable by normal economic forces or whether a squeeze is under way by large institutions.

We would no longer have for commodity professionals who trade on these markets any standards, such as the fitness standards which say that if you are convicted of a felony you are statutorily disqualified from trading on the markets. There would be no net capital requirements for commodity professionals who have client money. There would be no requirement of customer funds segregation.

We do not have insurance for customer funds in this industry, unlike the securities industry, and therefore segregating those funds is necessary to protect customers against broker insolvency.

We would no longer have the tools to prevent or detect fraud on the floor of the exchanges, like the audit trail provisions for example.

We think this would be a very pervasive deregulation. As I said, our only powers that would remain would be enforcement powers after fraud or manipulation occurred, and the Senate bill, unlike the House bill, also allows us to keep emergency powers. The problem is we would be unable to detect an emergency in its incipency, and therefore we do not think those emergency powers would give us the powers we need.

Senator COCHRAN. Senator Bumpers, do you have any other questions or comments?

COMPETITIVENESS OF U.S. EXCHANGES

Senator BUMPERS. Mr. Chairman, not to belabor the point and take too much time, but to pursue the very line of questioning you were pursuing.

Ms. Born, if the Chicago Board of Trade, for example, is correct in their assertion that unregulated competition is driving them out of business and that they have, in fact, only grown 10 percent

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while their competitors have grown 500 percent, would that not be an indication that something needs to be addressed?

Ms. BORN. I would be concerned if that were true. In fact, as I said, they have grown 130 percent over the last 10 years, more than doubled.

Senator BUMPERS. 130 percent of what? Volume, trades, or what?

Ms. BORN. Volume of trades. Over the last 10 years nationwide our exchanges have gone up to 500 million contracts. CBOT had its biggest year ever last year, and its profits were up by 26 percent in 1996, to \$19 million.

Senator BUMPERS. Do they file all that with you? Do they file their annual financial statement with you?

Ms. BORN. We receive a financial statement, yes.

Senator BUMPERS. And what was their profit? What was the increase in their profit last year?

Ms. BORN. Twenty-six percent. And they also built a \$183 million new trading floor last year, that just opened this spring.

Senator BUMPERS. Well, they argue two things. No. 1, it is not just their domestic competitors. They say this is now a global business and that some exchanges have moved to London because London, because of the time zones, can do more business in more time zones than they can do here, and that is how competitive. There is not anything unusual about that, I guess. Maybe other companies do that, too. But in any event, I did not understand it either, Ms. Born.

Ms. BORN. I do not understand. That is the first time I have heard that particular argument.

Senator BUMPERS. You have heard that they are moving people to London?

Ms. BORN. I know the London markets have for a long time been very dynamic markets. There is a very large market there called LIFFE, the London International Financial Futures Exchange. And there is also a very old market called the London Metal Exchange. They are two of the largest in the world.

Where much of the growth has been internationally has been in a number of other countries, a lot of emerging countries included, that in the past decade have recognized how valuable to the U.S. economy our futures exchanges have been in providing hedging against interest rate risk and stock index risk. A number of European, South American, and Asian countries have in the last decade set up futures exchanges that are focused on their domestic underlying cash markets. That is, the German exchange, for example, has a contract on the interest rates of the German Government securities, their German bond. They also have, I think, a contract on the German stock market stock index.

Our staff study found that the vast majority of these foreign contracts do not compete on a head-to-head basis with U.S. contracts because they are focused on the domestic markets of the foreign country.

All these markets are regulated by their domestic governments, and indeed all the major markets in the world have more government oversight and regulation than would be possible under the professional markets exemption.

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For more than a decade the Commission has been working with these foreign regulators to raise the level of foreign regulation. We have had some very bad scandals abroad because foreign regulators have lacked some of the basic tools we have.

For example, the Sumitomo matter last year in London occurred because the London governmental authorities did not have large trader reporting and therefore could not detect Sumitomo's large position. I think it likely that Sumitomo went from NYMEX, our market, to the London Metal Exchange in order that it could trade in the manner in which it was in an undetected way. Since the Sumitomo matter, the London regulators have required large trader reporting and made a number of other significant improvements.

We hold annual international regulators seminars for foreign regulators because the U.S. regulations and statute are the model for the world. Last fall we had our sixth annual international regulators meeting, where 80 participants from 30 foreign countries came to Chicago for a week to be trained by CFTC staff on our regulatory regime. And we are working with the principal regulators in the 17 countries with the largest exchanges to adopt international best practice standards for how futures markets should be regulated, to make sure that all these markets are safely regulated.

We cannot really do our job here if there are systemic risks coming from foreign markets.

Senator BUMPERS. Thank you, Mr. Chairman.

ROLE OF THE CFTC

Senator COCHRAN. Well, I think we have been educated a little bit this morning, or a lot, in terms of the role of the CFTC and the issues that are being considered by our legislative committees. I am on the legislative committee and I had the opportunity to attend some hearings on this subject and to listen to the arguments on both sides of some of these issues, and it is a very complex and highly technical set of facts that we are all having to work with and trying to understand.

It may be over all of our heads, to be real honest.

Ms. BORN. It is very complex.

Senator COCHRAN. But we are working very hard to come to grips with all of this and make correct decisions, well-informed decisions. So we appreciate very much your patience and your willingness to discuss these things with our committee.

Senator BUMPERS. When I was Governor I was down at the penitentiary one time and I said: You know, it seems to me that these guys need a little more opportunity to do things to occupy their minds. He said: They occupy their minds. I said: How do they do it? And he said: They gamble.

I said: What do they gamble on? He says—he looked up at a telephone line along the highway and he says: They will stand out in this field and bet which one of those blackbirds will fly first on that. I said: That sounds like the exchange markets. [Laughter.]

Senator COCHRAN. Thank you very much for being here and for your cooperation with our subcommittee. We appreciate it very much.

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Ms. BORN. Thank you very much, Mr. Chairman, and I would be very pleased to provide any information on any of these subjects at any time to you or other members of the subcommittee.

SUBMITTED QUESTIONS

Senator COCHRAN. Thank you. We may very well submit some questions on some of the specifics in the budget that we did not touch on this morning, and we would appreciate your responding to those questions in a timely way.

Ms. BORN. We would be delighted to do so.

Senator COCHRAN. Thank you.

Ms. BORN. Thank you very much.

[The following questions were not asked at the hearing, but were submitted to the agency for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR COCHRAN

MARKET SURVEILLANCE SYSTEM AND TECHNOLOGY INVESTMENTS

Question. The testimony submitted for the record indicates that additional funding is proposed in the fiscal year 1998 budget to allow the Commission to continue efforts started in fiscal year 1996 to redesign and implement an Integrated Market Surveillance System. What enhancements of this system are included in the fiscal year 1998 budget request? Is this amount included in the increase to maintain current service levels? What other technology investments are included in the fiscal year 1998 request?

Answer. No enhancements are budgeted for this system in fiscal year 1998, and there is no amount included in our current services level or program level for enhancement to the integrated market surveillance system. The "additional funding" statement in the testimony refers to three additional FTE's for the Market Surveillance program, a portion of whom will be used to analyze the additional large trader data that the redesigned integrated market surveillance system will be handling.

TECHNOLOGY INVESTMENTS

Question. What technology investment has the Commission made in each of the last five years to keep pace with the growth in the markets and what future investments are planned?

Answer. In fiscal year 1992, we established a separate operating environment on our existing mainframe computer to begin testing for conversion to a new operating system. The new operating system was needed to improve the efficiency of the mainframe and thereby to accommodate the increased processing capacity resulting from the growth in the markets. We also upgraded our local area network communications infrastructure in Chicago and New York to keep pace with staff utilization of computers and to provide greater stability and better performance. We also expanded the scope of our correspondence tracking system to allow more staff members to keep pace with a growing level of correspondence. In addition, the Commission installed an imaging system for use in expediting the processing, distribution and use of a variety of printed information including storage and retrieval of market-related news events.

In fiscal year 1993, we developed systems to simplify several difficult functions. One system, used in conjunction with the imaging system, resulted in accelerating the flow of information related to the Commission's legal opinions and interpretations and decisions of administrative law judges in futures cases. Another system was designed and implemented for tracking the Commission's review of exchange rule change proposals, thereby allowing quicker response to exchange and public inquiries regarding outstanding reviews. We also developed a system to support the investigations of trade practice abuses and other illegal market activities. As we did in New York and Chicago the year before, we upgraded our local area network communications infrastructure in Los Angeles to provide greater stability and better performance. We also began operation of the new mainframe operating system that was tested on our existing mainframe in fiscal year 1992.

In fiscal year 1994, we undertook several modernization steps to accommodate market growth and to allow the Commission to keep pace with the evolving migration to network-based applications. Specifically, capacity of communications links

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between CFTC locations was upgraded, allowing Commission staff interactively to access and manipulate shared information, thereby allowing intra-office collaboration. We upgraded the Commission's network servers and replaced older personal computers to accommodate the higher-performance computing requirements. The Commission moved toward adopting a client-server based software development and application platform standard which offers the opportunity for creation and maintenance of highly effective applications for shared use by all Commission staff regardless of physical location. We began design of a system for managing and tracking the reparations process—the first application of the client-server architecture. We also developed a new version of the Exchange Database system which processed additional data elements, provided enhanced search and retrieval capabilities and provided new reports to assist in detecting market aberrations. The Commission also conducted reviews of several emerging automated systems being developed by or for the exchanges including the New York Mercantile Exchange's ACCESS system and the joint Chicago Board of Trade and the Chicago Mercantile Exchange AUDIT system.

In fiscal year 1995, as part of our modernization program, we continued with the routine replacement of the oldest personal computers allowing the Commission more effectively to utilize sophisticated software. We also upgraded the communications interface between our mainframe computer and our personal computers, thereby facilitating the direct manipulation and importing of mainframe data by staff with their personal computers. We also upgraded the local area network communications infrastructure of our headquarters office in Washington. We implemented the Reparations Case Tracking System designed in fiscal year 1994. We developed enhancements to the existing (old) market surveillance system to allow for easier analysis of extremely complex trading data. We also prepared a Computerized Trading Report which analyzed the Chicago Mercantile Exchange's GLOBEX trading system and the New York Mercantile Exchange's ACCESS system. The report focused on the potential for enhancing access by market participants, improving the Commission's ability to audit the markets, and reducing the opportunity for trading abuses.

In fiscal year 1996, the Commission awarded a contract and began work on a multi-year effort for redevelopment of mission-critical surveillance systems. The re-engineering and relocation of these systems from the mainframe to a client/server environment offered a number of advantages. Financially, the Commission would avoid an inevitable upgrade of our mainframe computing facilities which would be necessary to accommodate a six-fold increase in data storage and processing requirements. Furthermore, since the surveillance system was responsible for about 80 percent of our mainframe utilization, this project was instrumental to our larger cost-saving goal of closing our mainframe data center in compliance with OMB Circular 96-02, Consolidation of Data Centers, by our deadline of June 2000. In fiscal year 1996, the Commission also established a website. The website includes background information about the Commission, press releases, speeches, and reports such as the Commitments of Traders and Bank Participants in Futures and Option Markets, Commission Orders and Advisories. The website also includes information about public programs such as Reparations. The Reparations program provides a method for the public to seek compensation for money lost to illegal futures schemes. The Commission also continued with its routine replacement of the oldest personal computers to the more efficient and serviceable industry standard models.

Regarding future investments, the Commission intends to continue with our modernization program in a number of areas. Each year we will replace a number of personal computers from the oldest stock with computers representing current technology. Likewise, we will maintain the required level of performance of network servers to service these higher-performance personal computers and our increased use of client/server applications instead of mainframe applications. Accordingly, we will use network servers with large amounts of magnetic storage, thereby eliminating our reliance on magnetic tape for storage of massive amounts of data. Within the next two years we plan to select and install new operating systems on all personal computers and network servers enabling a web-browser-like interface, thereby improving the ease with which our staff will be able to access and manipulate the increasing volume of information. In combination with our evolving Internet and the ever-increasing expansion in global use of the Internet, staff will be able to access all relevant information through a single interface. In addition, we will adopt the use of higher speed communications in both our local and wide area networks. We also plan a low-cost upgrade of communications interface cards with our servers and other key equipment to address the additional capacity required as we migrate our mainframe applications to the client/server environment and continue to automate other office procedures. With regard to our wide area network, we plan to increase

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our use of electronic receipt and transmission of information in place of magnetic tapes, diskettes and paper.

While these technology infrastructure enhancements are made, work will continue on the development and phased implementation of the Commission's new surveillance system. The new system will provide for the collection and integration of daily options with futures data to permit more complex analyses of activity in our markets. This will greatly enhance our ability to detect and deter market manipulation. Additionally, migration of systems from the mainframe environment to the Commission's client/server architecture will continue until all systems are operational in the client/server architecture and the mainframe data center will cease operation.

All new systems are being developed for operation in the new architecture. It is anticipated that this action will be completed by June, 2000.

INTERNET, TECHNOLOGY AND REGULATORY CHALLENGES

Question. Chairperson Born, you indicate in your prepared testimony that technology presents increasing regulatory challenges to the CFTC, including the need to police futures and option trading advice and sales offered illegally via the Internet. What is the CFTC doing to meet these new regulatory challenges?

Answer. The CFTC is meeting the challenges posed by new technology in various ways. First, the Division of Enforcement established an Internet monitoring and surveillance program in fiscal year 1996. Under the program, Enforcement staff monitors futures related "web sites" and "homepages" on the Worldwide Web, as well as messages posted on Internet bulletin boards. Staff also monitors various news groups and chat rooms relating to commodity futures and visited by Internet users. This monitoring of the Internet has generated enforcement inquiries concerning issues such as possible registration violations, possible misrepresentations of the success of trading programs and the offer of potentially illegal off-exchange products.

To date, the monitoring program has generated dozens of referrals for Enforcement staff and has resulted in the filing of a number of enforcement cases. For example, in September 1996, the Commission filed and simultaneously settled two cases resulting from this surveillance. In both cases, the Commission issued orders pursuant to which the respondents agreed to stop providing advisory services to Internet subscribers until they register as CTA's and comply with applicable regulatory requirements. *In re Brown*, CFTC Docket No. 96-8 and *In re Marks*, CFTC Docket No. 96-9. Enforcement staff was able to move quickly against Brown and Marks; both had agreed to enter into consent orders with the Commission within weeks of the time they first engaged in activities on the Internet. As a result of early detection, Brown had not successfully solicited any customers at the time his page was withdrawn. Marks agreed to refund all money received from subscribers and to transmit an electronic mail message over the Internet to all former subscribers notifying them of the action.

Second, the Commission is using the Internet both to disseminate and to gather information. Enforcement's homepage provides a brief summary of the types of abuses commonly investigated and prosecuted by the CFTC, provides descriptions of recently filed cases and encourages the public to report suspected abuses by providing an electronic questionnaire that can be filled out by visitors to the website. Enforcement has also used the Internet to obtain information from the public regarding particular matters. An example is the case of *CFTC v. Chancey*, Civ. No. 7:96-61 (M.D. Ga. filed July 1, 1996), an injunctive action against Donald Chancey and a firm controlled by him alleging fraud and registration violations in connection with the activities of an unregistered CPO. Enforcement is using its homepage to solicit information concerning the whereabouts of Chancey, who disappeared before the Commission filed its action against him. The Division has also posted on its homepage a picture of the defendant, as well as notices publicizing the court-sanctioned auction of Chancey's property.

ENFORCEMENT FUNDING

Question. Please tell us what additional funding and staff resources have been allocated to the Commission's enforcement efforts in each of the last three fiscal years, what enhancements are proposed for fiscal year 1998 and what future resources, funding and staff years, will be required to bring these efforts up to the level you believe is required to enable the Commission to effectively supervise the futures and option markets and to enforce the laws against fraud and manipulation in those markets.

Answer. In fiscal year 1995, the Commission obligated \$17.9 million and used 198 FTE's, and in fiscal year 1996, the Commission obligated \$19.0 million and used 202

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FTE's for enforcement related efforts. In fiscal year 1997, the Commission allocated \$21.9 million and 225 FTE's for enforcement related efforts.

It is difficult to project with any great precision what future resources the Commission will require in order effectively to supervise the futures and option markets and to enforce the anti-fraud and anti-manipulation laws applicable to those markets; many of the factors that dictate the Commission's specific future use of resources are beyond its control. For example, factors such as market events or the development of new financial products can require a quick response by the Commission, which, in turn, can require the reallocation of resources. However, the passage of proposed legislation reducing the Commission's regulatory tools to prevent and to detect fraud and manipulation would require substantial additional resources for enforcement activities. At the core of the Commission's supervisory efforts is a strong and fully staffed Division of Enforcement which enables both quick detection of wrongdoing and timely prosecution of administrative and injunctive actions when necessary. The Commission remains dedicated to using its resources as efficiently as possible to ensure that its enforcement efforts keep pace with the demands placed on it by the markets.

PROGRAM AND STAFFING INCREASES OTHER THAN ENFORCEMENT

Question. In addition to the Commission's enforcement activities, please indicate what other program and related staffing increases are proposed in the fiscal year 1998 request and the importance of the increased resources requested for each of these activities.

Answer. The Commission is requesting a net program increase of \$263,000 for all other programs. This net increase covers the compensation cost of three FTE's in the Contract Markets program, two FTE's in the Audit and Review program, and three FTE's in the Market Surveillance program. The three FTE's requested for the Contract Markets program will allow the Commission to keep pace with workload stemming from the Futures Trading Practices Act of 1992 as well as allow the Commission responsibly to respond to innovation in the marketplace. The two FTE's requested for the Audit and Review program will allow the Commission effectively to continue its oversight of the compliance programs of the self regulatory organizations and to conduct selected audits and examinations of registrants. The three FTE's requested for the Market Surveillance program will enhance the surveillance of exchange markets by developing additional software for complex analyses used for special reports. The increases will also enable the program to analyze a twofold increase in the number of large trader reports received, resulting from the collection of option large trader reports, as well as facilitate the change from a mainframe to a client-server environment for the surveillance system. The increase will also allow the surveillance staff to develop appropriate surveillance procedures to deal with intermarket analysis.

CURRENT SERVICES

Question. I understand that of the \$4 million increase requested to enable the Commission to sustain its current services level, 42 percent is for mandatory pay increases, 40 percent is for leased office space, and the remaining 18 percent is for systems analysis and other costs. (a) What mandatory pay increases does the fiscal year 1998 budget include? (b) Please provide a breakdown of the systems analysis and other costs required for the Commission to maintain current services in fiscal year 1998.

Answer. Mandatory pay increases include an anticipated cola/locality increase effective in January 1998, which is estimated to be on average approximately 3.1 percent, and the annualization of the January 1997 cola/locality pay increase which averaged 3.3 percent. Also included are costs for within-grade increases for fiscal year 1998 and the annualization of fiscal year 1997 within-grade increases. Other mandatory pay increases include increased costs in the agency contribution for personnel benefits. The total cost of all mandatory pay increases for fiscal year 1998 is \$1,678,000.

The \$659,000 requested for systems analysis is comprised of \$534,000 for applications programming support and \$125,000 for systems programming support. Other costs required for the Commission to maintain current services include \$1,592,000 for rental of office space for headquarters and regional offices and a net increase of \$60,000 for all other object classes.

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DEPARTMENT OF HEALTH AND HUMAN SERVICES

FOOD AND DRUG ADMINISTRATION

STATEMENT OF MICHAEL A. FRIEDMAN, M.D., LEAD DEPUTY COMMISSIONER

ACCOMPANIED BY:

ROBERT J. BYRD, DEPUTY COMMISSIONER, MANAGEMENT AND SYSTEMS

WILLIAM B. SCHULTZ, DEPUTY COMMISSIONER, POLICY

DENNIS P. WILLIAMS, DEPUTY ASSISTANT SECRETARY, BUDGET, DEPARTMENT OF HEALTH AND HUMAN SERVICES

MARY K. PENDERGAST, DEPUTY COMMISSIONER/SENIOR ADVISOR TO THE COMMISSIONER

INTRODUCTION OF WITNESSES

Senator COCHRAN. Our next subject is the budget of the Food and Drug Administration. We are pleased to welcome to our subcommittee Dr. Michael Friedman, who is the Lead Deputy Commissioner of the Food and Drug Administration; along with Robert J. Byrd, Deputy Commissioner, Management and Systems; William B. Schultz, Deputy Commissioner for Policy; and Dennis P. Williams, Deputy Assistant Secretary for Budget of the Department of Health and Human Services.

We know that you have others with you and if you would like to introduce any of them, please feel free to do so.

We will ask Dr. Friedman to make whatever comments or remarks he thinks might be helpful to our committee's understanding of the budget request. We do have your full statement and it will be printed in the record in full.

Dr. Friedman, welcome. You may proceed.

DR. FRIEDMAN'S OPENING REMARKS

Dr. FRIEDMAN. Thank you very much, Mr. Chairman. We do appreciate this chance to spend some time providing you with information this morning.

You have introduced and kindly allowed to accompany me, my colleagues. There are, as you pointed out, other agency key staff who will be available to answer questions after my opening remarks.

Sir, as you well recognize, the mission of our agency is to promote and to protect the public health of Americans, and today I serve as a spokesman for an agency deeply committed to ensuring that our citizens have confidence in the quality of their food, the medicines, the devices that are crucial to their health care, and the tens of thousands of other FDA-regulated products which we use daily.

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We recognize this is an enormous responsibility. My written statement describes in far greater detail our performance, a performance that demonstrates a capacity for self-critical evaluation and a pragmatic striving for improvement. Our performance also reflects a commitment to our mission, our responsiveness to the public and to Congress, and our stewardship of every tax dollar that is entrusted to us.

In the interest of conciseness, I would like to just briefly overview some aspects of our activities over the past year and to focus on three top priority requests which we have highlighted in our budget and which we are prepared to discuss more fully: The first is our food safety initiative to counter the threat of foodborne illnesses; the second, a sensible regulatory program to protect our youth from the diseases caused by the use of tobacco products; and third, reauthorization of two terribly important existing major user fee programs, the Prescription Drug User Fee Act [PDUFA] and the Mammography Quality Standards Act, both of which are set to expire in October 1997.

There are of course a number of difficult budget issues to be addressed in this environment of deficit reduction. We recognize this. We want to work with you and others to help resolve these issues.

Now, while time does not permit me to fully or properly convey the achievements of the various parts of our agency, I would like to highlight if I may some achievements from each of our centers, to set the framework for what sorts of successes we have had this past year which will justify and support our request for financial support for those activities this year.

Let me begin with the Prescription Drug User Fee Act. In 1992 this was designed by the appropriations and authorizing committees of both the House and the Senate, in conjunction with representatives of the drug industry and FDA, as an experiment. In this experiment, industry supplied additional resources to FDA in the form of user fees, which would be used specifically to improve application review for new drug and biologic products for humans.

Four years later, we judge this to be nearly a universal success. Patients get new drugs sooner, with better quality and length of life. Companies are able to market their products sooner. And we have gained the resources necessary to better perform our job.

The first chart demonstrates that since the initiation of this program we have consistently met and most often exceeded PDUFA's demanding and aggressive annual performance goals, and last year's were the best results so far. For example, drugs called new molecular entities are widely regarded as potential breakthrough products. The number of these approvals serves as an indicator of progress in medicine, and in this sense last year was outstanding.

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PRESCRIPTION DRUG USER FEE ACT		
On-Time Review Performance—Fiscal Year 1995 Submissions		
	Percent—	
	Goal	Actual
Original NDA's/PLA's/ELA's	70	95
Efficacy supplements	70	93
Manufacturing supplements	70	89
Resubmissions	70	96

Our Center for Drug Evaluation and Research approved 53 NME's. Last year's median time to approval was 14.3 months. Basically what happened was we approved twice the number of products in one-half the time, a really outstanding achievement for this center.

[CLERK'S NOTE.—The information appears as chart No. 1 accompanying Dr. Friedman's prepared statement.]

In the first year of PDUFA, we approved 70 drugs overall in a median time of about 24.1 months. Last year the agency approved 131 new drugs, including the NME's, in a median time of 15.4 months—a far larger number of products in a shorter period of time.

Another outstanding achievement last year was the approval by our Drug Center of 118 efficacy supplements. These are very important reviews and approvals. This was an unprecedentedly large number.

I fear that these will be seen as sterile statistics and they should not be viewed in that regard. These are issues of enormous personal importance to family members, to our friends, to everyone who needs new treatments.

This record of achievement can only be maintained with adequate resources and consequently reauthorization of what we think is a spectacularly successful user fee program is a top priority for us.

However, lest you think this sort of performance is an isolated exception, let me just briefly share with you representative data from some of our other centers. Our biologic center had a very, very productive year, approving some very important new products, including vaccines, blood products, diagnostic products, and therapeutic products.

If one looks at our Device Center, the number of premarket approvals went up dramatically. As you can see, between 1993 and 1996 the increase is really substantial.

[CLERK'S NOTE.—The information appears as chart No. 5 accompanying Dr. Friedman's prepared statement.]

That is a small but important part of our Center for Devices. A much larger component of the activity of the Center for Devices are the so-called 510[k] products. Here you can see that our timeliness in dealing with these products has improved dramatically. Now, in excess of 90 percent of these products are reviewed within a statutory review cycle.

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This work represents roughly 98 percent of all the activities of the Center for Devices.

[CLERK'S NOTE.—The information appears as chart No. 6 accompanying Dr. Friedman's prepared statement.]

A topic of importance to this committee is the entire reengineering process that is taking place in our Center for Veterinary Medicine. With last year's legislation, working very closely with Congress, working very closely with the involved industries, a major reinvention effort has been initiated so that we review these products in a more timely, more complete way, and we think in a more efficient way. This is a very important experiment that we are very committed to seeing succeed.

[CLERK'S NOTE.—The information appears as chart No. 8 accompanying Dr. Friedman's prepared statement.]

Now, Mr. Chairman, I describe these highlights of last year's performance not as an exercise in self-congratulation, but rather I want to make the case, based I hope on what will be convincing evidence, that with your continued support, with a sufficient budget, and with our determination to improve ourselves, we are prepared to meet the public health challenges ahead.

One of the most important and significant public health challenges ahead for us is to protect the public against foodborne illness by implementing the Presidential food safety initiative. Americans rightfully expect their food to be wholesome and safe and, with rare exception, it is. We do, however, know that problems exist.

Millions of foodborne illnesses occur each year and perhaps as many as 9,000 Americans die as a result. The total estimated costs involved may be \$5 billion, and these costs both in terms of lives and economic consequences are unacceptable.

FOOD SAFETY INITIATIVE

PROBLEM: INCREASED INCIDENCE OF FOODBORNE ILLNESS, PARTICULARLY OF MICROBIAL ORIGIN

- Estimated 6.5 to 33 million illnesses and up to 9,000 deaths annually
- Estimated total costs of foodborne illness are \$5.6 billion
- Food product recalls for life threatening bacteria (Class I) increased from 79 in 1988 to 378 in 1995
- Microorganisms becoming resistant to traditional control measures and developing pathogenic characteristics
- More retail establishments are processing foods on-site
- Increase in imported foods
- Vulnerable populations are growing in size (e.g., the elderly, immuno-compromised)

When an outbreak of foodborne illness is recognized, we act quickly and vigorously. We act in cooperation with other Federal—such as USDA, CDC, NIH, and EPA—State, and local public health authorities, and with members of the industry. We need to recognize in a timely way the problem and then to have the scientific tools to ascertain the cause of the problem and to initiate the means to stop the problem from spreading.

Last year, for example, thanks to such teamwork we were able to limit the public's exposure to apple juice contaminated with an

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E. coli 0157–H7. The manufacturer promptly recalled the unsold product, a national warning was issued, and many consumers did not drink it. Even so, 66 North Americans were made ill and, sadly, one little girl died of complications of this foodborne illness.

A more recent example has been the hepatitis A outbreak associated with frozen strawberries, and this is another example of how Federal agencies working together can cooperate in a more effective way. Both USDA and the Food and Drug Administration were notified in March by the State of Michigan of a possible link between hepatitis A and frozen strawberries from a processor in California. We began working in cooperation with the State of California Health Department and we inspected the processor's facility, conducted a full inspection, and began an investigation of the product's distribution.

CDC was integrally involved in working up the epidemiology of this outbreak. Working together, we identified that 13 specific lots were of concern. A decision was reached to administer gamma globulin to schoolchildren who had consumed the strawberries within 14 days from those lots, and we proceeded to recall the product with the cooperation of those industrial processors.

So far during the course of the outbreak investigation, the source of the contamination has not yet been determined. Contamination could have occurred anywhere from harvest to consumption. Despite the complexity of this situation, cooperation among FDA, CDC, and USDA, State and local authorities helped greatly to contain the outbreak.

It may not be possible to identify the specific cause of the outbreak of hepatitis A in these strawberries. To date we are pleased that there are no confirmed cases of hepatitis A occurring outside of Michigan associated with the consumption of these particular berries.

These outbreaks underline for all of us the need for a strengthened interagency cooperation in surveillance, inspection, consumer and foodworker, from field to retail education, risk assessment, and the supporting research, as we request in our budget.

FOOD SAFETY INITIATIVE

- Surveillance—Enhance the early warning system
- Inspections
- Risk Assessment
- Research
- Education
- Coordination—USDA, CDC, EPA, NIH and State/local officials

Now, sir, another major task we face in the coming year is to begin implementing our tobacco rule, which is designed to better protect our most precious resource, the youth of the country, against the devastating effects of tobacco. The President announced the rule last August and, as the members of the committee are aware, last Friday the U.S. District Court in North Carolina upheld the agency's jurisdiction to regulate cigarettes and smokeless tobacco as combination drug-device products, although the court limited the agency's authority to regulate advertising.

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While both sides will appeal aspects of the ruling, the court has permitted the agency to continue to implement the requirement that retailers not sell to persons under the age of 18.

This regulation we believe is critical to protection of the public health because every year smoking causes the premature death of more than 400,000 Americans, a number of people which is greater than those who die each year from AIDS, from alcohol, car accidents, murders, suicides, illegal drugs, and fires combined.

The agency's rule is premised on the fact that most tobacco users begin use during childhood and that the most effective public health strategy is to prevent children from starting to use tobacco products. In fact, at present 3 million American youngsters use tobacco products. An additional 3,000 children and young people start smoking every day. We know that one-third of these individuals will die prematurely as a result of smoking.

YOUTH TOBACCO PREVENTION INITIATIVE

- 3,000 Young People Become Regular Smokers Each Day
- Average Teenage Smoker Starts at 14½ Years Old and Becomes a Daily Smoker by 18
- Every Year 1,000,000 Young People Become Regular Smokers
- One-Third of These Children and Adolescents Will Die Early from Their Use of Tobacco
- 5,000,000 Children Alive Today Will Die Prematurely from Smoking
- Tobacco Kills More than 400,000 Americans Each Year
- Smoking Rates of 8th Graders Increased 50 Percent in 6 Years

We have begun implementing the access provisions upheld by the court in cooperation with State and local authorities as the first step in a program that is aimed at reducing tobacco use by minors by a total of, we hope, 50 percent in 7 years.

Our budget request will focus on outreach to educate retailers and others about these new rules, and on contracts with State officials to begin enforcing this new program.

YOUTH TOBACCO PREVENTION INITIATIVE

- Outreach
 - Retailers
 - Tobacco Manufacturers, Distributors and Other Affected Parties
 - State and Local Officials
 - Community and Public
- Enforcement and Evaluation
 - Cooperative Federal and State Enforcement
 - Possible Demonstration Projects with States
 - Evaluation—CDC Collaboration

Mr. Chairman, in addition to these three priority tasks—the food safety initiative, the restriction of access to tobacco products by minors, and the reauthorization of two existing user fee programs—we face many longer term challenges to which we will have to find solutions in order to continue to protect the consumer and to promote the public health.

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FDA CHALLENGES

- New Scientific Knowledge
 - Xenotransplantation
 - Genetic Revolution
 - Tissue/Biomaterial Engineering
 - Microsurgery
 - Cell Biology
- Public Access to Useful Health Information
- Partnership with the International Community

These challenges include the need to appreciate and utilize the rapidly growing scientific information with which we are confronted, to make meaningful health facts more accessible to the public and to their health care providers, and to advance global efforts for harmonization and the sharing of public health standards in order to safeguard the quality of imported products regulated by FDA.

FDA faces a number of challenges. The greatest challenge is to achieve these goals despite the fact that our workload will continue to increase and that it will outstrip our resources. Pragmatically, we recognize that it is not enough for us simply to work harder; we must also work smarter and we must work more effectively and cooperatively with others, especially our sister agencies USDA, CDC, NIH, and the State and local officials.

We believe that we can meet these challenges in the very best tradition of our nine-decades-old agency, and more than anything else, sir, we want to do so.

Again, we appreciate this opportunity to provide you with this information and we certainly are ready to answer questions.

PREPARED STATEMENT

Senator COCHRAN. Thank you very much, Dr. Friedman. We have your complete statement and it will be made part of the record.

[The statement follows:]

PREPARED STATEMENT OF MICHAEL A. FRIEDMAN

Mr. Chairman, members of the Committee, I appreciate the opportunity to appear before you and present the 1998 Food and Drug Administration budget proposal.

As a background for our 1998 budget request, I would like to begin with a description of the FDA's Congressional mandates and the expectations of the American public, and how we are accomplishing our mission.

FDA'S CORE MISSIONS

The American people have come to expect and rely on the FDA for many services that contribute to their sense of security and enable them to lead productive lives—protection of the safety and wholesomeness of our food supply, maintenance of the high standards of effectiveness and safety of our drugs and medical devices, and assurance of the safety of our blood supply and vaccines, etc. We are committed to upholding those standards and meeting those expectations.

The promotion and protection of the public health is our principal mission. FDA's responsibilities annually cover more than \$1 trillion worth of products, many of which are vital for human health. Our diverse activities include—but are not limited to—licensing blood banks, monitoring clinical investigations, as well as reviewing and approving prescription drugs, generic drugs, animal drugs, vaccines, biologicals, medical devices, devices that emit X-rays, and food additives.

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Our mission, as the nation's oldest consumer protection agency, is to provide the basic public health protection for the foods we eat and the drugs we take. The assurance that FDA is present, everyday, doing its job, is so fundamental to what we know and expect as public health protection, that we almost take it for granted. Americans have the luxury of not needing to worry about thousands of products including breakfast cereal, pain relievers, contact lenses, vaccines, and cough medicine.

When we inspect manufacturing establishments to make sure they use the materials and processes necessary to produce safe and effective products, and when we monitor imported products to make certain they meet the same high standards as domestic products, we help sustain the American public's confidence and peace of mind.

We have been protecting consumers against an ever-growing number of potential public health risks for more than nine decades. As significant advances are steadily made in science and technology, FDA is continually presented with complex new questions, for which we are committed to seeking and finding new answers. At the same time, we are also committed to improving the FDA's many operations so that all of its work is done as efficiently and effectively as possible.

In this testimony, I would like to summarize some of our recent achievements and actions that have enabled us to protect and promote the public health more effectively than ever before, and to describe some future opportunities and challenges.

DRUG APPROVALS

Recently, no area of FDA's responsibility has been more closely scrutinized by Congress, industry, health professionals and the public than the approval process for new drugs—or, more specifically, the speed with which new therapies of proven effectiveness and safety are made available to those who need them.

Let me therefore begin this report by citing our most recent achievements under the Prescription Drug User Fee Act of 1992. As you know, PDUFA has given us additional resources in exchange for our commitment to meet demanding review goal deadlines without sacrificing high public health standards. This important five-year authorization will expire later this year.

After more than four years' experience with PDUFA, there is no doubt that this approach works. The Agency has consistently succeeded in meeting its annual performance goals—in fact, it has exceeded them in almost every category. When combined with our internal management initiatives, the additional resources provided by PDUFA bring important products to patients with unprecedented speed and assurance.

Last year's record of drug approvals by the Center for Drug Evaluation and Research (CDER) illustrates why reauthorization of PDUFA is a top priority for FDA.

All drugs approved by FDA are important, but perhaps none are as meaningful in bringing new hope to patients as new molecular entities (NME's). These are products that include active ingredients never before marketed in this country. The number of NME's approved each year is regarded as one indication of real and meaningful medical progress. Last year, that progress was exceptional: FDA approved 53 NME's submitted by the pharmaceutical industry, nearly twice as many as the year before.

Let me put last year's figures into perspective by referring back to the passage of the Kefauver-Harris amendments. The average annual total of NME's in the decade of the 1960's was 13.7. In the 1970's, the corresponding figure went up to 17.3. In the 1980's, the average was 21.7 NME's, and in the first half of this decade, the average was 25.6 NME's. In 1996, the 53 NME approvals were a doubling.

Last year's approvals also were much faster than in the past. In the late 1980's, the median times for NME approval approached 30 months. The median time to approval for the 53 drugs approved in calendar year 1996 was 14.3 months, less than half the time it took as recently as the late 1980's. [Chart 1]

New cancer drugs approved last year were notable for their effectiveness against a broad spectrum of cancers: Hycamtin is used for the treatment of patients with metastatic carcinoma of the ovary; Camptosar for those with colorectal cancer; Taxotere for women with advanced breast cancer; Gemzar for patients with cancer of the pancreas; and Nilutamide for men with cancer of the prostate.

The NME category also included Accolate, the first of a new class of drugs for asthma sufferers; Aricept, the second treatment for patients with Alzheimer's disease; and Copaxone, a treatment for those with relapsing-remitting multiple sclerosis.

Nine of the NME's approved last year, including two drugs for cancer and three for HIV, were approved in six months or less. Crixivan, a protease inhibitor for the

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treatment of HIV, was approved in just 1.4 months. Twelve of the NME's, including three protease inhibitors, were developed—from the first commercial Investigational New Drug submission to marketing approval—in less than six years.

Moreover, the total number of new drugs and biological products—including NME's—approved in the last calendar year was 139, which is 63 percent more than the total the year before. [Charts 2-3] New Drug Applications (NDA's) accounted for 131 of these products, and their median time to approval was 15.4 months, 7 percent faster than the 16.5 months the year before.

BIOLOGICS AND BLOOD SAFETY

Our Center for Biologics Evaluation and Research (CBER) last year made decisions that represent important contributions to the safety of the blood supply, including two new test kits for the detection of HIV infection. One of these kits is designed for screening of donated blood for HIV-1 antigen, a substance that in most cases is detected before the virus antibodies. By reducing the so-called "window" period, when donors may be HIV-infected but their tests are still negative for HIV antibodies, the antigen screening could prevent an estimated 5-10 transfusions of HIV-infected blood a year.

The other HIV test kit approved last year was the first system that includes collection of blood samples at home. It was developed to facilitate blood testing by the more than 60 percent of Americans who are at risk of HIV, but do not visit a medical facility to have their health status checked. In addition, FDA also approved the Amplicore HIV-1 monitor test, the first test approved for the quantification of the HIV-1 virus in human blood.

In all, CBER last year completed 17 major biological approvals, as compared with 12 such approvals the year before. Last year's major biological approvals included Raspigam, the first medication to protect infants against respiratory syncytial virus, a potentially fatal disease; Avonex, the second interferon product for multiple sclerosis; and Verluma, a new diagnostic imaging agent that can determine the extent of small cell cancer in different parts of the body at one time. The median approval time for the 17 biological products was 14.9 months, 15 percent faster than in 1995.

The public health has also been well served by the approval of the acellular pertussis vaccine, which is safer than the traditional whole-cell pertussis vaccines. Another notable approval, issued earlier this year, was for a new recombinant Factor IX for treating people with Factor IX deficiency hemophilia. This product does not contain any pooled plasma derived proteins, and therefore presents no risk of transmitting viral infection.

COMPARISON WITH FOREIGN REGULATORY BODIES

There are many other ways to measure our performance in drug review. One of them—which is frequently used by the media and some critics of our Agency—is comparing our performance with that of our counterparts abroad.

We have checked this performance gauge before, and last year we took another look, this time by comparing all new drugs that were approved last year by both the FDA and the new centralized drug approval process of the European Union. There were 15 of such drugs, and their median time for FDA review and marketing approval was 5.8 months. The median time for review by the Committee for Proprietary Medicinal Products and final EU authorization for a company to sell those 15 common drugs in Europe was 12.2 months. In four instances, the EU authorization came first—in one case, just three days ahead of FDA. In 11 instances, the drugs were first approved in the U.S.

These results are another illustration of FDA's commitment to improve the quality of life of citizens. Nonetheless, our goal is not to compete with any foreign regulatory authority, but rather with time itself. Our goal is to continue to challenge ourselves to constantly improve our own performance—patients, those that care for them, everyone expects no less.

While these improvements could not have been made without the resources added by PDUFA, there has also been a concerted effort to streamline and optimize our entire management system. A substantial reorganization of parts of the Agency has been taking place in the last few years. As a result, all FDA Centers last year achieved notable results.

MEDICAL DEVICES

As a striking example, the Center for Devices and Radiological Health (CDRH) improved its premarket approval reviews (PMA's) while maintaining the review times for abbreviated application—510(k)s. This latter category of applications—which accounts for the vast majority of all submissions to CDRH—covers devices

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that are substantially equivalent to devices already on the market. In fiscal year 1996, CDRH approved 43 PMA's, a six year high, and 24 major new products, an all-time high. [Chart 4]

One of the notable products approved in 1996 was the Thoratec Ventricular Assist Device System that serves as a bridge to cardiac transplantation. The Center also approved many first-of-a-kind products such as the Ultramark 9 High Definition Ultrasound System, an aid in differentiating benign from malignant breast lesions; the Septrafilm Bioresorbable Membrane, used for reduction of postsurgical adhesion; and the Reliance Urinary Control Insert, a device intended for the management of stress urinary incontinence in adult women. [Chart 5]

Eight of the 15 PMA's submitted to the agency in the first half of fiscal year 1996, received a first action within the 180-day deadline. This was a significantly better performance than in 1994 or 1995.

Even though we are approving more PMA's for increasingly complex devices, and we have improved the time to first action, the PMA approval time is coming down only slowly. It takes too long—more than two years—to complete the entire process. CDRH and the agency are focusing now on innovative ways of bringing down the PMA review times, just as we have done for NDA's. But, here again, much depends on the level of resources available to do the work.

CDRH has also successfully managed the review times for 510(k) applications. In fiscal year 1996, the median review time for these devices that received a finding of substantial equivalence was 85 days. At their peak in 1993, the reviews were almost 70 percent longer—144 days. Even accounting for applications that had to be returned to the manufacturer for more information, the average 510(k) review time in fiscal year 1996 was 110 days, down from the peak of 184 days in fiscal year 1994. Overall, CDRH has done a remarkable job in solving review problems that had plagued the Center for years. They have significantly shortened review times without sacrificing the increased scientific and medical rigor of the reviews. We are not satisfied with our performance, but we are steadily moving in the right direction. [Chart 6]

We also take real satisfaction in the high standards for mammography facilities achieved under the Mammography Quality Standards Act (MQSA) of 1992. Since the law was passed CDRH, working with the American College of Radiology and state authorities, has set standards, and inspected and certified more than 10,000 facilities. The first year's inspections after the program went into effect showed that 80 percent of the facilities had only minor violations, if any at all. A recent report by the General Accounting Office found that second-year inspections revealed "considerable reduction in the proportion of facilities" with violations.

The performance of our drug and device Centers deserves special attention because of the public health importance of their work, and high interest in their achievements. Other FDA Centers, however, also had results last year that reflected gains in efficiency and positive effects on the public health.

FOOD AND VETERINARY MEDICINE

The Center for Food Safety and Applied Nutrition (CFSAN) has implemented several initiatives to speed up the food additive petition review process and reduce the inventory of pending petitions. The Center brought in scientists from other program areas; allocated additional resources to modernize its electronic information processing infrastructure, and to contract the technical services of "third party" reviewers; instituted changes in its Office of Premarket Approval to better respond to legislative mandate and industry demands; and used various means—from one-on-one meetings to the World Wide Web—to provide guidance to petitioners on how to improve the quality of their submissions to the Agency.

The effort has paid off in reduced petition inventory and faster reviews. In June, 1995, there were 295 petitions in the CFSAN inventory, including food and color additive petitions, GRAS affirmation petitions, and citizen petitions. By the end of last fiscal year, the Center had received an additional 82 petitions, but the inventory was 60 petitions below the total in June 1995. During calendar year 1996, CFSAN took final action on 88 petitions, 54 of which were approvals—the highest number in any year in a decade. [Chart 7] Moreover, the median time from receipt to approval of food and color additive petitions decreased from 37 months for petitions approved in fiscal year 1993 to 27 months for petitions approved in the last fiscal year. Again, we have not yet achieved the results we want, but we are continuing to advance toward them.

CFSAN has also authorized health claims providing information on the relationship between food components and health. Last year, FDA issued a final rule covering health claims that associate adequate dietary intake of folic acid and the re-

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duced risk of neural tube birth defects, which in this country affect approximately 2500 children each year. In August, 1996, a claim was authorized on the relationship between sugar alcohols and reduced risk of dental caries. In January, 1997, the Agency authorized health claims stating that foods containing soluble fiber from whole oats may under certain circumstances reduce the risk of heart disease.

Our Center for Veterinary Medicine has been working closely with animal drug manufacturers, producers, and veterinarians designing a new and more flexible animal drug approval process that reduces the time and cost necessary for meeting the requirements for a new animal drug approval. [Chart 8] Full implementation of the changes was made possible by the enactment of the Animal Drug Availability Act of 1996. Among other improvements, the ADAA eliminates the need for dose titration and optimization, and provides the Agency with the latitude to redefine the statutory term "substantial evidence" of drug effectiveness. The changes are evidence of the remarkable achievements that become possible when government and the private sector work together.

ACHIEVEMENTS OF THE OFFICE OF REGULATORY AFFAIRS

One of the most demanding tasks of our Office of Regulatory Affairs, whose inspectors and investigators operate in offices throughout the United States and Puerto Rico, is surveillance of the rapidly mounting number of imports of FDA-regulated products. While the number of our port-of-entry personnel has increased by only 285, the number of shipments with products within FDA purview has increased from 500,000 in 1970 to nearly 3.7 million last year.

Last year, ORA began implementing a new automated system—called Operational and Administrative System for Import Support (OASIS)—that greatly speeds up FDA's handling and clearance of imported products by maintaining electronic communications between the agency and the brokers. With OASIS, the broker receives FDA's initial admissibility determination on every shipment within eight minutes after the broker submits the necessary data to the agency. For eight out of ten shipments, the initial FDA clearance is final. The paper-less system, whose implementation will be completed by the end of September, will cover every U.S. port of entry where FDA-regulated products arrive by sea, land and air.

Another major responsibility of ORA's regional, district and field offices and laboratories is to maintain a round-the-clock vigilance against hazards to the public health. A typical example of this demanding duty is the recent action by FDA's field office in Los Angeles against several products that were supposed to be mildly intoxicating but instead were implicated in cases of nausea, vomiting and respiratory arrest among mostly young people who had ingested them at a New Year's Eve concert.

FDA field office launched investigation within hours after the incident, and on January 1, we issued a public statement warning consumers against the so-called "fx" products—"CHERRY fx BOMBS," "LEMON fx DROPS" and "ORANGE fx RUSH"—which apparently had been distributed for free to the concert goers. Subsequently, FDA took possession of more than 9,000 vials with the fx potion and notified the distributor that the products present an unreasonable risk of illness or injury to those who consume them.

Mr. Chairman, I have mentioned the highlights of FDA's performance last year as evidence that our agency is dedicated to its public health mission, competently staffed, and steadily advancing in its scientific skills while introducing flexible, less burdensome but no less valid regulatory procedures.

We have taken important strides forward, and we are well positioned to make even more effective use of day-to-day operating resources as well as to strategically plan for managing new responsibilities.

In addition to our important ongoing efforts, there are three major tasks that we perceive to be fundamental for the fulfillment of our public health mission in fiscal year 1998.

First of all, we must implement—in cooperation with federal, state and local public health authorities—the Administration's food safety initiative.

FOOD SAFETY INITIATIVE

Americans rightfully expect their food to be wholesome and safe, and with rare exceptions, it is. We know, however, that problems do exist. According to the Council for Agricultural Science and Technology, up to 33 million foodborne illnesses occur each year, and as many as 9,000 people—mostly the very young and the elderly—die as a result.

Hospital stays associated with microbial foodborne illnesses are estimated to cost more than \$3 billion a year, and the estimated total expenditures due to foodborne

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illnesses are at least \$5.6 billion. These costs, both in lives and economic consequences, are unacceptable.

Last year's outbreak of *E. coli* 0157:H7 contaminated apple juice on the West coast is another example of why we need to improve our system for protecting food. We were first alerted when one of our food scientists spotted on the Internet a reference to a previously unreported *E. coli* outbreak in the state of Washington. After a diligent inquiry he found the person associated with the Internet notice—a University of Washington physician who had uncovered a cluster of patients with Hemolytic Uremic Syndrome, an extremely serious illness caused by *E. coli* in which blood cells dissolve and the kidneys suffer severe damage.

The first clue to the cause of the outbreak was provided by state and local officials in Seattle who had interviewed the patients and found that they all had consumed the same brand of apple juice. Samples of the suspected product were brought to FDA's Seattle laboratory, which began testing them for the presence of *E. coli* 0157:H7.

Commissioner Kessler was notified and he initiated a conference call beginning at 9 o'clock that night with experts from FDA, CDC, state and local health authorities, and representatives of the manufacturer. After the call was concluded, at 4 a.m., the manufacturer of the apple juice recalled all of the already distributed contaminated products, and a press release was issued warning the public against consuming the juice they had already bought. As a result of this rapid intervention, the outbreak was limited to 66 Americans and Canadians. Tragically, one of them—a little girl in Colorado—died of complications of this foodborne disease.

We were able to help contain this outbreak thanks to the fast reaction and cooperation from federal, state, and local public health officials as well as from the juice manufacturer, who instituted an immediate recall of the unsold products and warned the public against consuming the juice they had already bought.

But we also were fortunate. First, Kings County in Washington has a disease surveillance system similar to the FoodNet system supported by CDC, FDA, and USDA. If the same outbreak had taken place in other areas of the country, we might not have made the connection until many more people had become ill.

Second, Federal health officials took charge of the situation rapidly and received prompt cooperation from all the relevant federal, state, local and industry participants in the incident. But this was a fairly exceptional experience. For the emergencies that take place under less favorable circumstances, we need to have effective and consistent coordination in place before the outbreak takes place.

Similarly, if we knew more precisely how this deadly form of *E. coli* grows and multiplies, how it infects the food and how it is transmitted to humans, we could act more quickly and decisively when events of this sort take place. Our research and risk assessment work will bring us closer to the knowledge we need to devise educational programs to teach consumers and food processors how to avoid and combat such contaminants. And we must have additional inspectors if we are to ensure that food safety standards are being met.

In recent years, we have taken several significant steps to improve food safety. We are now implementing the Hazard Analysis and Critical Control Point (HACCP) system for seafood, and the U.S. Department of Agriculture is doing the same for meat and poultry. FDA and USDA have supported the efforts of the Centers for Disease Control and Prevention to create a system of FoodNet Sites for identifying disease outbreaks. And Congress enacted new legislation last year aimed at protecting the public—particularly children—from pesticides. But our system is still largely outmoded, and it is time to bring food safety into the contemporary world of automation and modern science.

We are therefore asking your support for new resources to carry out FDA's share in the Administration's food safety initiative which is described in detail in the budget.

PREVENTION OF TOBACCO USE BY MINORS

A second major task is our public health and legal obligation to protect our most vulnerable population—our youth—against the devastating effects of tobacco.

For the past three years, our agency conducted an extensive investigation into public health aspects of the use of tobacco, which kills more than 400,000 Americans each year—more than acquired immune deficiency syndrome, alcohol, car accidents, murders, suicides, illegal drugs, and fires combined.

We found evidence that nicotine is addictive; that it produces pharmacological effects which are the primary reason why people use tobacco; and that manufacturers know these facts.

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The most striking discovery, however, was the overwhelming evidence that the enormous public health burden linked with tobacco products originates when the users are young, a stage of life that's most carefree and susceptible to risk-taking. Eighty-two percent of adults with any history of smoking had their first cigarette before the age of 18, and more than half of them had already become regular smokers by that age.

Each year, one million youngsters in this country become regular smokers—and one-third of them will die prematurely of lung cancer, emphysema, and similar diseases linked to their addiction. About three million of our adolescents smoke, and another one million boys use smokeless tobacco. Tobacco use and nicotine addiction can be properly called a “pediatric disease.”

Based on these findings, FDA last year determined that it has jurisdiction over cigarettes and other tobacco products, and issued regulations restricting their sale and distribution to children and adolescents.

This year, we—together with our sister public health agencies and state and local authorities—are embarking on an enforcement program designed to reduce young people's use of tobacco products by 50 percent in seven years. It is an enormous undertaking: despite the fact that it is against the law in all 50 states to sell cigarettes and smokeless tobacco to minors, our young people purchase an estimated 1.26 billion dollars' worth of tobacco products each year. Recent surveys have shown that adolescent smoking, after several years of decline, is again on the rise.

As a public health agency we feel a deep obligation to see this program carried out. Earlier, I mentioned our implementation of the Mammography Quality Standards Act, the most important advance in the public health protection for the nation's women. Protecting their children—our youth—from nicotine and tobacco is an equally urgent and deserving task whose future benefits will far outweigh the current funding needs.

PDUFA AND MQSA REAUTHORIZATION

Our third important task is to achieve reauthorization of two user fee programs—PDUFA and MQSA, both of which expire on October 1 of this year. Both of these programs set demanding performance goals and provided the additional resources necessary to accomplish the agreed-upon objectives. As I have discussed earlier, the principle of linking higher productivity, through performance measures and goals, and the collection of user fees to finance specific program activities has been a success, and there are important opportunities for these existing programs. The Administration has proposed expanding the use of that principle to other FDA activities which I will address in more detail shortly.

THREE LONG-RANGE CHALLENGES

Beyond these immediate tasks, FDA faces longer-term challenges for which we must find solutions if this country's public health is to continue to be as well served as Americans expect and merit.

One of the most demanding problems—as well as the greatest opportunity—is the prodigious outpouring of new scientific knowledge that directly impacts on our responsibilities as a public health agency. Scientific information is growing far more rapidly than could be foreseen even a decade ago, and the sheer volume of new insights is nearly unimaginable.

While our agency scientists, such as those at the National Center for Toxicological Research, are hard at work to keep abreast of these developments, we face a constantly expanding task. At any particular moment, we have to be thoroughly competent in understanding such disparate issues as the biology of genetically altered tomatoes, the safety and effectiveness of eye surgery with a laser beam, and the effectiveness and side effects of new unique classes of highly toxic drugs. Our mission involves therapeutics, restoratives, diagnostics, nutritionals, and many other scientific disciplines whose complexity is constantly growing. We must devise additional ways of making the best use of the cutting edge of new knowledge. In order to properly oversee the translation of basic science observations to applied practical application, we must have this facility.

Another challenge we will have to meet is improving accessibility to meaningful health information. Accurate product information is absolutely vital to patients and health care professionals. In many ways, information is our new currency. Having a new drug or a new food or a new medical device, without having the information how to use it properly or safely, is to no one's advantage. We must struggle not just to get new products on the market, but to make sure that there is information about their benefits and risks, so that the health care provider and individual can make informed decision about proper use. We have learned from our experience with the

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new food label and with prescription drug information leaflets that well-presented and accessible information may be the most powerful tool we have to improve the public health. With the cooperation of the industry, we are about to institute major improvements in the labeling of non-prescription drugs, but more remains to be done.

Finally, I must include one more important long-range challenge that FDA has to address in order to continue maintaining this country's traditional standards. With the globalization of manufacturing, trade, and consumption, members of the international community—including ourselves—recognize the value of harmonized regulatory standards and, possibly, shared compliance surveillance. It is our only realistic option for ensuring the standards of foreign-made regulated products, whose imports to this country have increased seven-fold in the last 25 years.

For FDA, this is an expanding mission that calls for the development of international contacts, knowhow and negotiating skills within a scientific framework. Moreover, we find that—as one of the world's oldest consumer protection agencies—we are expected to do our full share. To advance our country's national interests, we are doing our best to meet these expectations.

A good example of our contribution is the International Conference on Harmonization of Technical Requirements for Registration of Pharmaceuticals for Human Use (ICH), the most important international effort in the regulatory field that seeks to harmonize submission data for drugs in the U.S., Europe and Japan. Less than five years' old, ICH is completing the adoption of more than 40 consensus guidelines, many of which are based on our standards. We also are providing leadership for similar international efforts to harmonize the standards for veterinary drugs, and for medical devices.

All of these challenges are even more formidable because we realize that the growth of our work load will continue to exceed our resources. The prescription drug and medical device industries maintain a growth rate of more than 8 percent a year, as measured by the value of manufactured shipments. Research and development in the same industries increases by more than 12 percent each year, and imports of all FDA-regulated products are increasing at a rate greater than 7 percent a year. We are determined to meet this challenge by increasing our cooperation with others, whether in government, academia or industry; by not only working hard but also by employing novel solutions when old practices no longer meet the need.

BUDGET OUTLINE

Turning to FDA's fiscal year 1998 budget, the Administration's request is a total of \$1,064,388,000, including \$820,116,000 in budget authority and \$244,272,000 in user fees. A total program level of this amount will enable us to carry out the core activities of premarket review and postmarket surveillance as well as move forward with new initiatives to promote and protect the health of the American people.

Food Safety Initiatives—\$24 Million

For FDA's portion of the collaborative effort with CDC, EPA, and USDA, we are requesting \$24,000,000 to begin implementation of activities aimed at reducing the incidence of foodborne illnesses and resultant economic losses by enhancing the safety of the nation's food supply. This funding would provide the elements pivotal to food safety such as seafood inspection efforts, consumer and industry education (particularly at the retail level), surveillance, including in particular the establishment of a new national early warning system for outbreaks of foodborne disease, risk assessment and research. The activities would lay a foundation of cooperation and communication to rapidly deal with emerging public health hazards.

Youth Tobacco Prevention Initiative—\$34 Million

On August 23, 1996, President Clinton approved FDA's final rule that limits the availability and appeal of tobacco products to adolescents. For our part of this effort, FDA's budget request includes \$34,000,000 for the costs associated with implementing this regulation. The funding will be used for outreach to retailers, manufacturers, state and local officials and communities, and enforcement and program evaluation.

Buildings and Facilities—\$14.6 Million

The budget request includes \$14,550,000 for the second phase of construction of the Arkansas Regional Laboratory facility for FDA's field operation in Jefferson, Arkansas. Construction of this laboratory is a cornerstone of FDA's Field Lab Consolidation Plan, and will provide state-of-the-art analytical services that are currently carried out at four laboratory facilities.

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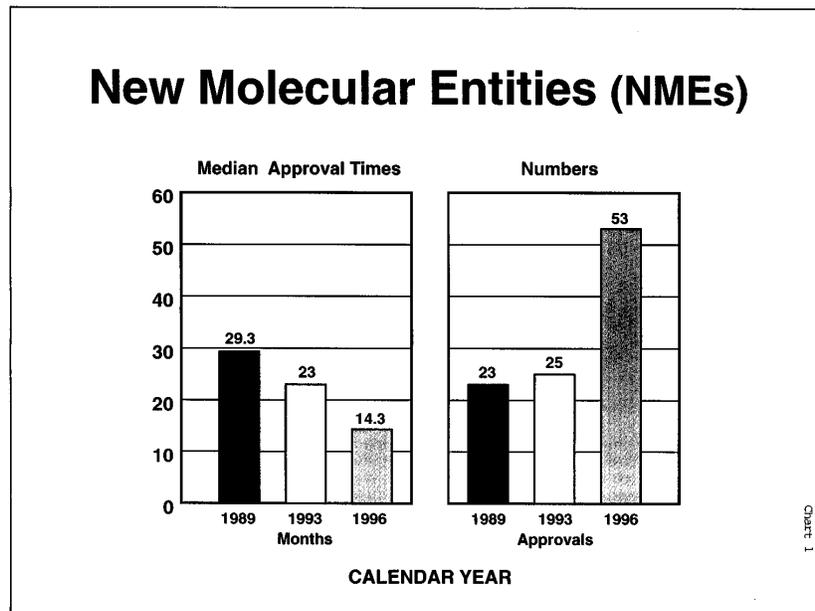
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User Fees—\$244.3 Million

A total of \$244,272,000 is proposed in the budget for user fees. The proposal includes \$91,204,000 in connection with the reauthorization of the Prescription Drug User Fee Act of 1992 and \$13,966,000 in connection with the reauthorization of the Mammography Quality Standards Act of 1992, both of which sunset on October 1, 1997. The request also includes \$7,459,000 in already authorized user fees for export certification and the certification of insulin and color additives.

In addition, the proposed budget includes new user fees of \$131,643,000. These new fees would partially cover premarket and postmarket activities costs in most of FDA's major program areas—foods, human drugs, biologics, animal drugs, and medical devices. These industries derive great benefits from consumers' confidence in FDA's review processes and product surveillance.

The Administration believes that FDA provides a vital public health service by protecting consumers from unsafe and impure regulated products, and that industry—which greatly benefits from FDA's assurance of the quality of such products—should help pay for a portion of the agency's costs. FDA will work with Congress and the agency's many constituencies, including the regulated industries, to implement the proposed fees in conjunction with agreed-upon performance measures and goals that are linked with the provided resource levels.



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New Priority Drugs Approved in 1996

- AIDS - 6
- Cancer - 9
- ALS - 1
- Alzheimer's - 1
- Spinal cord/
Multiple sclerosis - 2
- Antidepressants - 1
- Antipsychotics - 1
- Antifungal - 1
- Antiparasitic - 1
- Orphan Metabolic - 2

Chart 2

New Biologics Approved in 1996

Diagnostics

- Blood Diagnostics - 7
- Cancer Diagnostics - 3
- Heart Disease - 1
- Skin Test - 1

Vaccines

- Hepatitis A - 2
- Haemophilus b - 2
- DTaP - 2

Therapeutics

- Cytokines - 4
- Growth Factors - 2
- Recombinant
Thrombolytic Enzymes - 2
- Immune Globulin - 1

Chart 3

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Breakthrough Devices Approved in FY 1996 & FY 1997

- Laser system to treat esophageal cancer
- Less invasive BPH treatment
- Urinary insert for stress incontinence in women
- Lasers for surgical treatment of nearsightedness
- A device that makes reading pap smears easier
- In vitro tests to identify cancer recurrences
- Ventricular assist device for failing hearts
- Fetal bladder stent under HDE

Chart 4

PMA Approvals Decision Cohort

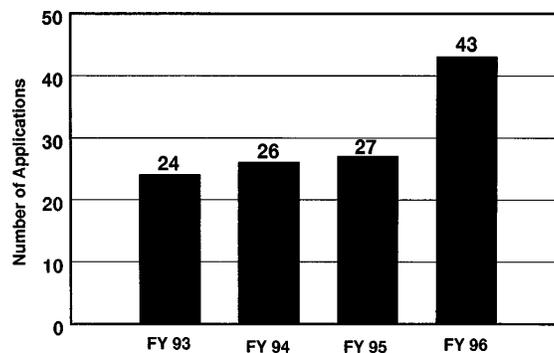
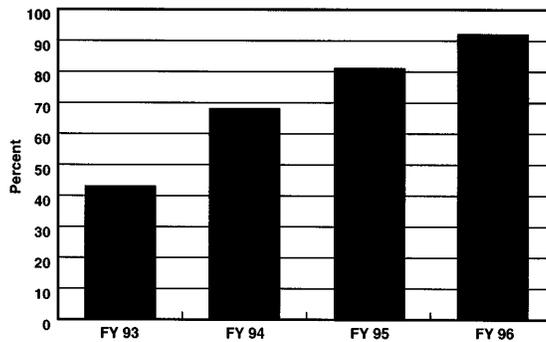


Chart 5

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510(k) First Action Performance within 90 Days Receipt Cohort

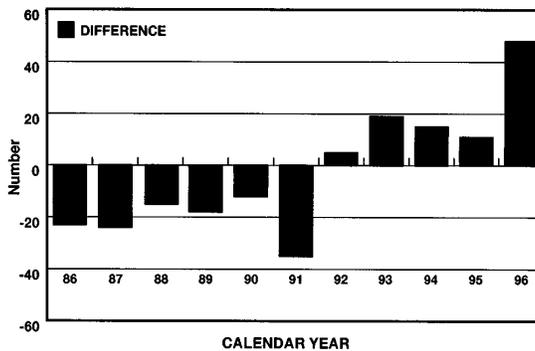


1st Action <= 90 Days*	2636	4414	4933	4995
Total # Received	6310	6452	6078	5316

* As of 12/31/96

Chart 6

Food & Color Additives and GRAS Petitions Completed 1986 - 1996

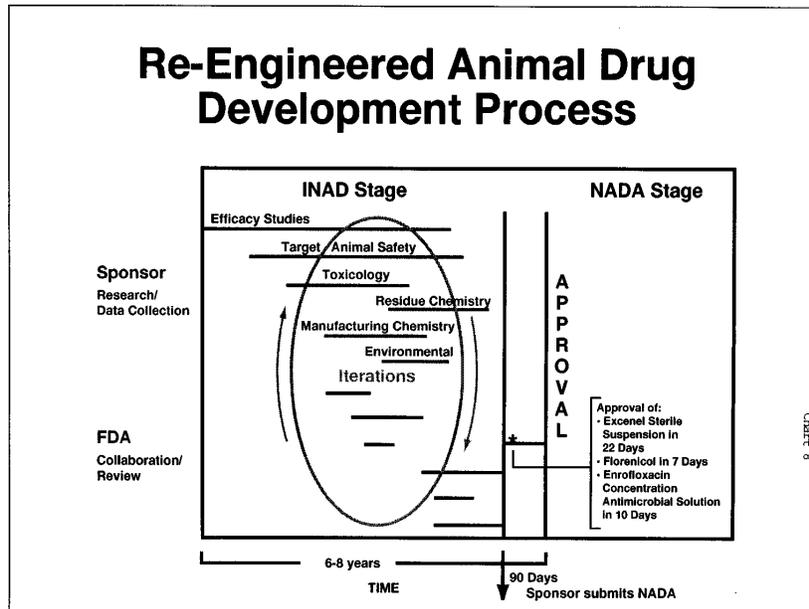


	86	87	88	89	90	91	92	93	94	95	96
RECEIPTS	103	90	83	90	69	73	57	54	44	59	40
FINAL ACTIONS	80	66	68	62	57	38	62	73	59	64	88
DIFFERENCE	-23	-24	-15	-18	-12	-35	5	-19	15	11	48

Chart 7

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BIOGRAPHICAL SKETCH

MICHAEL A. FRIEDMAN, M.D.

As Lead Deputy Commissioner, Michael A. Friedman, M.D. provides leadership and management of high-priority Agency initiatives aimed at addressing important public health issues. He oversees the work of the FDA Centers and the field offices. He works in concert with the Commissioner, the Center Directors, and the other Deputy Commissioners to maximize the efficiency and effectiveness of the FDA's efforts. He also represents the Agency in interaction with the public, other Federal agencies and the regulated industry, and foreign governments on issues related to the broad mission of the Food and Drug Administration.

Dr. Friedman received a B.A. degree in English from Tulane University, New Orleans, Louisiana in 1965 and an M.D. degree from the University of Texas, Southwestern Medical School, Dallas, Texas in 1969. His postgraduate medical training was at Stanford University, Stanford, California and the National Cancer Institute, Bethesda, Maryland, and he has Board Certification in Internal Medicine and Medical Oncology.

Prior to his October 1995 FDA appointment, Dr. Friedman served as the Associate Director of the Cancer Therapy Evaluation Program from 1988-1995 and as Chief of the Clinical Investigation Branch from 1985-1988 within the Division of Cancer Treatment at the National Cancer Institute and the National Institutes of Health. From 1975 to 1983, Dr. Friedman was a faculty member at the University of California San Francisco Medical Center serving as an Associate Professor in the Department of Medicine, and the Director of Clinical Affairs and the Interim Director of their Cancer Research Institute. Dr. Friedman's professional activities at the local and national level have included appointment to the various posts in the American Society for Clinical Oncology, as well as membership in the American Cancer Society, American Society for Cancer Research and the Western Society for Clinical Investigation. His scholarly activities include authorship of numerous scientific articles and book chapters as well as editorial board responsibilities for books and journals.

Dr. Friedman has been a career Public Health Service Commissioned Corps member and currently holds the rank of an Assistant Surgeon General. He has received the PHS Commendation Award in 1992, the EEO Special Achievement Award in

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1993, and the PHS Distinguished Service Medal in 1997. He is a member of Phi Beta Kappa and Alpha Omega Alpha honor societies.

USER FEES

Senator COCHRAN. Dr. Friedman. I am going to ask a couple of questions and then yield to my friend from Arkansas.

Let me ask you first of all about the user fees that are contemplated in the budget submission. We notice that the total is \$131,643,000 for proposed user fees on subjects such as foods, human drugs, biologics, animal drugs, and devices—all new user fees. So your budget request is offset, in effect, to the extent of almost \$132 million by the assumption that user fees will be authorized by Congress.

We do not have the power in this committee to authorize those user fees. We are an appropriations committee and not a legislative committee. So unless the legislative committees in both Houses agree to recommend that and report legislation out to do this and it is passed by both Houses and signed by the President, we do not have the authority to direct that those user fees be paid into the Treasury.

So what if the legislative committees do not approve this offset? What are you going to do when we approve a budget that is \$132 million less than what you need because of the new user fees you have requested? What is going to happen to your functions and the contemplated things that you outline here that you are going to use all this money for?

Dr. FRIEDMAN. It is a very important question, sir, and one that we are focusing on. You recognize that this budget is an attempt, along with other parts of Government, to deal with everyone's interest in reducing the deficit and at the same time providing a level of public health protection. We think the bottomline figure that we have identified is fully supportable and appropriate.

But to answer your question, if those funds, if that \$132 million, is not available, the impact on the agency would be very, very serious. Our ability to act in a timely way and in a complete way on many of our activities would be seriously compromised.

Senator COCHRAN. One thing that comes to our mind here is that such a level of funding would be 8 percent below this current year's level for FDA's ongoing activities.

Dr. FRIEDMAN. Yes, sir.

Senator COCHRAN. So to put it in perspective for everybody, with this amount contemplated in new user fees—

Dr. FRIEDMAN. Sir, my understanding is it could be up to a 17-percent reduction. But the point you are making is exactly the same, which is this is a large, serious impingement and would have very dire consequences on all of our activities.

TOBACCO REGULATION FUNDING

Senator COCHRAN. Well, it will be an interesting set of choices that you will have to make if those user fees are not approved. For example, you are requesting increases for food safety and tobacco youth prevention programs. When you add that in, you get to about a 15- to 17-percent reduction below the current year's funding level.

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Well, my next question is on the tobacco regulation issue. You mention the North Carolina case and the new authorities that you have under the decision, and we know, as you suggest, that that will be appealed and we do not know how that appeal will be decided. But what is your view now about the impact that that decision and the new regulatory powers you are assuming for tobacco regulation, what the impact of that will be on your budget needs for the next fiscal year?

Dr. FRIEDMAN. I believe, sir, that the budget needs for the next fiscal year that we have outlined are still entirely appropriate. I believe that the kind of program that we envision, one which involves activities largely delegated to States with a relatively small investment in activities within the FDA here, not only is a prudent policy from a fiscal point of view, but we think also is the most efficient way in which to do this.

Senator COCHRAN. Well, if there will not be any impact on those regulations, then you are going to have to shift money from salaries and expenses or other parts of the budget to pay for it unless the new user fees are approved, will you not?

Dr. FRIEDMAN. If we are able to achieve the bottomline figure by working with your committee and others, by working with industry, if we are able to achieve that total budgetary figure, then we believe that there is a great deal that can be accomplished for the public health. If it is a smaller number than that, for whatever reason, then you are quite right, sir. We will have to make some very difficult choices, not just with respect to those programs, but other very important programs that we are involved in.

Senator COCHRAN. Senator Bumpers.

USER FEE AUTHORIZATION

Senator BUMPERS. Mr. Chairman, you certainly hit the nub of the problem here and I will not pursue it except to ask you this, Dr. Friedman. Have the authorizing committees approved these new user fees?

Dr. FRIEDMAN. I will ask Mr. Byrd, if you would, please.

Senator BUMPERS. Is that just in the generic legislation that you have?

Mr. BYRD. There is generic legislation, but the authorizing committees have not approved it as of this time.

Senator BUMPERS. They have not?

Mr. BYRD. They are considering, but they have not approved it.

Dr. FRIEDMAN. That is correct.

Senator BUMPERS. So you are going to have to get that authority before you can collect those fees, are you not?

Mr. BYRD. That is correct.

Dr. FRIEDMAN. That is correct, sir.

Senator BUMPERS. Have you testified before the appropriate committees on that issue?

Mr. BYRD. Yes.

Senator BUMPERS. The authorizing committees?

Mr. BYRD. We have appeared before those committees.

Senator BUMPERS. I am not sure I understand those user fees well enough to state that I favor them or do not favor them. But certainly I am really troubled, because I have been a strong sup-

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porter of FDA. I want to support your budget. But I just know the way things go around here. I mean, everything can come unraveled in a moment's notice.

Dr. FRIEDMAN. It is a very difficult year in that regard, sir, and we recognize that. Our job here is really twofold, in a way. One is to show you that we are responsible and careful managers and that what we are doing has value, and I think we can certainly do that, and invite your questions in that regard.

The second issue, the parallel issue, involves how the Government will pay for all the important functions. You have many competing interests that petition your attention and these are worthwhile, good interests, and we understand what a difficult job you have. This is not something that is unique to us. It is true for many parts of the Government—USDA, Transportation, Commerce, a number of parts of the Government. All are wrestling with this same thing.

We recognize the difficulty of that and just want to work as productively as we can with you in that regard, sir.

Senator BUMPERS. Do you want to comment on that?

Mr. BYRD. Just, if I may, clarify a statement. A moment ago I mentioned that in our appearances before the authorizing committees we had discussed user fees. We have discussed PDUFA with the authorizing committees, but we have not testified with regard to this generic user fee bill yet. That user fee bill has been submitted by the White House, but we have not testified about that user fee bill at this time.

Senator BUMPERS. What assurance, if any, do you have that those committees will authorize these new fees?

Mr. BYRD. We have no assurance.

Senator BUMPERS. I hate to say this, use this word—we have ignored the authorizing committees sometimes on setting budgets around here when we probably should not have. But there is likely to be an outcry if we mark up this bill and we give you the billion something you are requesting and it includes those user fees, the chairmen of those authorizing committees may say nothing or they may say a lot, and that could create a real firestorm in the Senate, on the floor.

Dr. FRIEDMAN. We have certainly heard, sir, from a variety of different groups their concerns or opposition to these fees, and we know that those interests have made their concerns known to various Members of Congress.

ARKANSAS REGIONAL LABORATORY

Senator BUMPERS. Needless to say, Dr. Friedman, I have a deep and abiding concern about NCTR, and you have asked for \$14 million some, I think with last year's \$13 million something, to complete phase two.

Dr. FRIEDMAN. Correct, sir.

Senator BUMPERS. Is that correct?

Dr. FRIEDMAN. Phase one is initiated. This \$14 million would be for phase two.

Senator BUMPERS. And you feel comfortable that that amount will be able to complete phase two?

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Dr. FRIEDMAN. I have asked that question and have been assured that that is very true, and that all of the scientific and regulatory activities that we hope to nest within that new facility are also moving to confluence on exactly the same timetable. This represents a very important scientific-regulatory fusion at that location. It is part of our field reorganization and downsizing and consolidation, and I think both the administrative, the scientific, and the physical, the building itself, are all flowing together in an appropriate way, sir.

Senator BUMPERS. Phase one is under construction, is it not?

Mr. BYRD. That is right, phase one is under construction.

Senator BUMPERS. Do you have any idea what the phase three costs will be?

Mr. BYRD. Phase three runs about \$9.8 million. That is for the administrative and office areas.

Senator BUMPERS. Would you be asking for that money for 1999 or not?

Mr. BYRD. We probably will be asking for it in 1999.

Dr. FRIEDMAN. Yes.

Senator BUMPERS. Have any field lab consolidations taken place yet?

Mr. BYRD. Yes; we have started some field laboratory consolidations. As Dr. Friedman mentioned, the consolidation associated with the Arkansas regional laboratory will consolidate six laboratories down into Arkansas, and that is cost effective. We anticipate that that will save the agency about \$56 million over a 20-year period.

Senator BUMPERS. You anticipated my next question.

Dr. FRIEDMAN. Not only that, but I believe that the group that is most skilled at doing research and analyses for dioxin has already moved down to the Arkansas facility, I believe from Chicago. So there is real research, there is real collaboration going on now, sir.

Senator BUMPERS. I know that you have in the past 2 or 3 years had to reduce the FTE's at all of these labs. I thought it was just NCTR, but I realize that is across the board now. But I notice you are holding steady this year now.

Dr. FRIEDMAN. Yes.

SAFETY AND EFFICACY OF APPROVALS

Senator BUMPERS. Now, let me just make a topical comment on that point, not just on that particular matter, but, for example, I applaud your obviously tremendous efforts to approve drugs and devices in a much more expeditious way than in the past.

Let me just voice my concern. If you would care to comment on it, by all means do. My concern is there has been tremendous political pressure. I have sat in this committee year after year and I have heard some of my colleagues browbeat Dr. Kessler about speeding up the approval process. And while that is a highly desirable goal, that standing alone is not a justification.

If you can speed up the process and be as certain as you would have otherwise if you had longer time, that is fine. But I just want to say that this is one Senator who would really be terribly disturbed to think that we were hastening the process just in order

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to be as competitive with Germany and Italy and some of the other countries who have a little faster approval time than we do, or have had in the past. I do not know that that exists any more.

And I know you have done a great job, as you pointed out this morning and Dr. Kessler did last year, about approving new items and drugs in a much more expeditious manner. But as I say, I just want to be sure that these drugs are safe. I think the ordinary citizen has no idea how much illness there is in this country because of a misuse of drugs or because of side effects that had not been anticipated, because two drugs do not match with each other when you put them in your body. I think that, as I say, I know from talking to doctors that is a massive problem for them.

Dr. FRIEDMAN. If I may, let me respond with just a couple of comments, sir. One is that the tension you describe is exactly right. We recognize that no product is ever totally safe and no product is ever totally effective, and so what we must do is try and see developed and then promulgated information about what risks and benefits a product offers to a particular individual.

We want to provide excellent information, so that patients can make choices, so that doctors can help patients make choices, so that reimbursers and insurance companies can reimburse appropriately for those choices. To the extent that we are an information purveyor, that is a crucial role for us in the future. That is based on science, and what we must do is to try and integrate all the new science in the most effective way possible.

We are balancing. We are dealing with this tension you describe. We want to have as much of the information as we can, but we do not want to be ponderous or delay getting an important product to the public. We want to be as right as we can be, but we cannot be perfect. We know that, and this is a balance.

Please.

Mr. SCHULTZ. If I could just add something, in the new drug area it is important to distinguish between typical drugs that are maybe at most slight advances over what is available and truly breakthrough drugs for very sick people. In the first area, which is the largest number and is what those charts largely reflect, the theory of the Prescription Drug User Fee Act was that the agency could go faster with more resources. And I think we are very confident there has been no diminution of the standards or of safety and efficacy. There are a lot of difficult decisions and so on, but I think we are very confident there has been no change.

The harder issue is where you have a drug for a disease where there is nothing else available and at what point in time do you give people access to that product? This does not tie into so much the desire to speed up the approval as trying to balance the issue of when do you have the right amount of information to allow a company to promote a drug. And it is one that has been debated and we worry about it, and I think we share your concerns. We feel like we have struck the right balance, but it needs to be continued to be discussed.

The other point I want to make is, some of these issues are going to come up in terms of so-called FDA reform legislation both for drugs and devices, and we share your concerns there as well. We

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want to be very careful so that any legislation that is enacted does not undercut the agency's ability to assure safety and efficacy.

MEDICATION GUIDES

Senator BUMPERS. One further point, Mr. Chairman, and I will conclude with this. Last year we had considerable debate and discussion about FDA's role in developing these—I forget what you call them. It is what they give you at the drugstore about the contraindications of the drug and so on.

Dr. FRIEDMAN. Med guide, medication guide.

Senator BUMPERS. Yes; last year I think we gave you some authority, did we not, to elaborate and cooperate with the pharmaceutical companies in developing those?

Dr. FRIEDMAN. That is right.

Mr. SCHULTZ. You basically set up a system where there would be a voluntary program until about the year 2000 with FDA doing surveys and setting standards. But the market will be allowed to work until 2000, and then at that point we are to come and do a survey and see if 75 percent of people who buy prescription drugs get adequate information. And then, if they do not, you gave us authority to take action.

Senator BUMPERS. OK.

Dr. FRIEDMAN. We think it is a very satisfactory proposal.

Senator BUMPERS. You all are happy with that?

Dr. FRIEDMAN. Yes, sir.

Mr. SCHULTZ. It is interesting. What happened is all the different groups got together as a result of the legislation and came up with a plan that then went to the Secretary, and the Secretary adopted. So our sense is there is now, as a result of the legislation, a much broader agreement on what the right steps are.

Senator BUMPERS. I am not critical of the pharmaceutical companies. When you buy a prescription drug now you get one of those things. They just peel them out of a computer. They are extremely helpful. They may not be as comprehensive as they ought to be. A layman has no earthly idea whether he is getting all the information he needs on that or not. So I think when FDA weighs in on it we will all feel just a tad safer on the information we are getting being accurate.

Thank you very much, Mr. Chairman.

BLOOD SUPPLY SAFETY

Senator COCHRAN. Thank you, Senator.

Last year, we provided direction to the Food and Drug Administration to move forward aggressively, in consultation with the Centers for Disease Control and Prevention, in taking measurable steps to prevent and respond rapidly and effectively to cases of viral and pathogenic contamination of blood products. The hemophilia community remains on the frontline in exposure to viruses contaminating our Nation's blood supply. We still think the FDA needs to pursue all measures required to assure safe blood products, including instituting a patient notification and product recall and withdrawal system.

Last year, we discussed this in this budget hearing and we were assured that there would be cooperation and action by the FDA on

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this subject. There was a meeting held, but there has been no action that I know of taken by the FDA to institute a patient notification system. And a lot of questions that we raised at that hearing are still unanswered.

It is my understanding that in November a meeting was held with the National Hemophilia Foundation and others who were interested to discuss these issues, but no further action to my knowledge has been taken to develop a process to respond to the concerns or to these cases.

Many of the issues this subcommittee sought to address last year were identified in a 1995 report by the Institute of Medicine entitled "HIV and the Blood Supply." Two years later, many of the concerns were cited in an extensive report on FDA oversight of the blood supply completed by the General Accounting Office. That report reinforces my concern that serious confusion continues to exist over the informal system of communication between FDA and manufacturers and manufacturers and their distributors of blood products.

GAO recommended the publication of guidelines that clarify FDA's intentions when issuing memoranda and other communications to manufacturers and when recommending product recall and withdrawal. It seems to me we have an ongoing problem that is not being addressed in a vigorous and committed way.

The question is, Can we expect the FDA to take any action to develop a document, a well-defined guidance document, that spells out the decisionmaking procedures for initiating a blood product recall or withdrawal following an adverse event, and when can we expect FDA to institute a patient notification system that fully protects people with hemophilia and other bleeding disorders, as well as the general public?

Dr. FRIEDMAN. I appreciate the chance to respond to this really important question. We do take these very seriously and I am pleased to give you updates and what has occurred since last year.

Deputy Commissioner Mary Pendergast has been very involved in this area and I would ask her to please begin.

Ms. PENDERGAST. Thank you, Senator. I would agree that you raised a very important question. We have taken steps that perhaps you are not aware of. In the first instance, we have switched the organizational structure within the FDA as to how to respond to instances where there is bacterial or viral contamination of products. It is now handled by our field force and by our Division of Emergency Operations. So the same kind of emergency response team that we would have sent in because of E. coli in apple juice will be triggered in the blood industry as well. So we have a whole group of people, a decisionmaking tree, a rapid mobilization response.

We have also given the lead authority for the initiation of recalls to our field force. That is the way we do it in the rest of the agency and we have moved the plasma fractionation and blood industry model into our normal model, which is where the field force has the responsibility for initiating recall recommendations and following through.

We have met with industry. We have, shall we say, reminded them in a very stern way of their obligations under our longstand-

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ing rules that when there is a class 1 recall they have an obligation to work with their distributors to get information to the final consumer of the product. In the case of plasma fractionation products, that would mean the users of the product, the hemophiliacs.

We have met with the hemophiliac organizations, with the national organization, the National Hemophilia Foundation and the Committee of 10,000. We have met with each of them. We have scheduled additional meetings to see what else we can do.

We have put all FDA recalls of blood and plasma products on the Internet immediately, on a fax-on-demand system, and on another system where you can call in and get the information.

We are also forcing the companies to take more seriously their obligation to immediately classify these situations as a recall. When you call it a recall, everyone knows, whether it is patient, doctor, or distributor, that there is something potentially wrong with the product. For too long the companies were calling these voluntary market withdrawals, giving people the false sense that there was nothing wrong with the product. We have gotten much stricter in terms of holding the companies' feet to the fire to make sure that at the first instance they correctly characterize these situations as a recall.

So we are taking steps and we will continue to do so with the appropriate consumer and other groups.

Senator COCHRAN. Thank you very much. I am encouraged by that report, and I hope that you have an opportunity to put that in a form that we can make available to those who have called us and written us complaining that they do not think enough has been done. This does seem to be an important step in the right direction and we appreciate that very much.

Ms. PENDERGAST. Thank you.

LOU GEHRIG'S DISEASE

Senator COCHRAN. There is also a continuing concern about amyotrophic lateral sclerosis [ALS], a fatal neurological disorder known as Lou Gehrig's disease. Approximately 20,000 Americans, I am told, are affected. The NIH recently discovered that an inherited form of ALS involves a gene that produces aberrant forms of superoxide dismutase. I ought to check that out, how to say it.

Dr. FRIEDMAN. You said it perfectly.

Senator COCHRAN. It has come to my attention that the FDA's Peripheral and Central Nervous System Drugs Advisory Committee will conduct a hearing on May 8 on a new drug application for Amyotrophin which may be helpful to ALS patients.

My reason for bringing this up is to try to bring this to the attention of the highest levels of the FDA and encourage you to look very carefully at any new drug applications and to tell us, if you can now, what your expectations are for the approval of drugs that are approaching the stage where they can be approved by FDA to deal with this very serious and debilitating disease.

Dr. FRIEDMAN. You are quite right, Mr. Chairman, this is really a devastating disease and a disease that is not satisfactorily treated with current products. The agency did approve a product recently and that was an important first step, but this was not an

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entirely satisfactory product. It does not cure the disease. The patients still have an inexorable course that we are unsatisfied with.

It would be inappropriate to predict how the advisory committee will act on that, and I know you are not asking for that at all. What I can tell you is that these are the sorts of diseases, sorts of situations, where the agency is most committed to working with patient groups and companies to generate the clinical data as rapidly and completely as possible, so that products can be approved for these situations.

There has been a considerable amount of discussion about the testing of this product in the past and the data in the past have not been entirely consistent, sometimes looking favorable, sometimes not. I think that there is information that will be reviewed at this meeting that will be very important.

ACCOUNTING FOR PDUFA FUNDS

Senator COCHRAN. I know that we have on the books a law that permits user fees to be collected for pharmaceutical applications, licensing, and other activities to, in effect, accelerate and avoid delays from occurring through FDA's system. That is up for reauthorization and we are encouraging our friends on the legislative committee to look at that and provide new authority to continue that program. The industry seems anxious to see that is continued as well.

I would hate to get in a position to know that the FDA is taking money from that process and using it to check ID's of 27-year-olds who are buying tobacco products. That is part of, as I understand, your tobacco regulatory procedure. I am hearing from people who own grocery stores, who own other businesses where tobacco products are sold, and they hear about this new regulation that you are going to enforce, requiring them to check the ID's of anybody who is 27 years old or younger?

Dr. FRIEDMAN. You ask two important—

Senator COCHRAN. Although the law applies to 18-year-olds. Is that what I understand?

Dr. FRIEDMAN. You ask two important questions, sir. Let me respond to the first one, and then I would ask Mr. Schultz to please respond to the second.

Your point that there has to be scrupulously careful and transparent accounting for funds is something that we absolutely agree with and believe in. So that the whole purpose of the user fee program was to have money allocated for review functions identified and trackable for certain products, and we have been very careful to make sure that those funds are used only for those activities.

So one of the concerns you have—and it is a very appropriate concern—is, as more pressure is placed on the financial resources of the agency, can we continue to assure this committee that we will be as careful and as scrupulous and as transparent about our accounting as we have in the past? I absolutely commit to that, sir. That is required by the law.

EXPENDITURE PRIORITIES

Senator COCHRAN. I do not want you to be that scrupulous, because you have not been very scrupulous at all in my view. I can

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show you where we have outlined in categories of importance and priorities where we think the FDA dollars ought to be spent, and then you come up and show us where you did spend them and they are totally different from what we have outlined in our bill and in our committee report.

That is one of the hardest things to get the FDA to do, and that is to stick by its word on how it is going to use the funds when we appropriate them, and even to the point of, I think, callous disregard of the views of the Congress on where the funds are appropriated, as to how the funds are spent by FDA. We cannot find out how you are using the money. Until this year, we could not find out what you are spending on rent. We have a rental account and you also take money out of salaries and expenses and spend it on rent.

I would like for you to tell us in the budget request, an amendment, submit an amendment and tell us how much you need next year for rental or office space expenses. We cannot find that clearly indicated in the budget, and every year we get a runaround when we try to find out these and other FDA costs.

Dr. FRIEDMAN. Sir, I am very sorry that there seems to be a miscommunication on this. We very much want to be responsive to your requests in this regard.

Each year we have submitted to Congress a formal accounting of our user fee activities, and I thought that was the initial thing that you were talking about. We very much would like to meet with you or your staff or any members of the committee to go through that in sufficient detail to be clear.

With respect to your second point, which is providing to the committee in a format that you find useful and helpful the information that you need to help make these decisions, let me assure you, sir, that we very much want to do that.

Mr. Byrd wanted to comment.

Mr. BYRD. Yes, Senator Cochran; we have attempted to provide the information that the committee has requested. We have redesigned our submission to this committee for fiscal year 1998 to identify the total required for rent. This total is \$69 million, \$46 million provided by the General Services Administration, and the remaining \$23 million from salaries and expenses. So we tried to provide the information that was requested.

Dr. FRIEDMAN. But the point is, sir, this is not to say that what we did was as helpful to you as you would like. What is more important to convey is our willingness and interest. We cannot ask you to make really hard decisions, we cannot ask you to be as helpful to the agency and the public health as you can be, if you feel like you are not getting the kind of information that is most useful to you. So this is very important to me.

Senator COCHRAN. I just have the impression that we are being intentionally misled by this agency on the issue of the budget. That is why last year we tried to spell out as clearly as we could what our views were about how the funds that we were appropriating should be spent in terms of emphasis, program area and office. That accompanied the appropriation. That has not seemed to work as well as we thought it might. So I think your invitation——

Dr. FRIEDMAN. I am sorry.

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EXPENDITURE PRIORITIES

Senator COCHRAN. I think your invitation for us to get together, have staff meet and talk about this and go over in some more detail our concerns and why I am a little aggravated by it all—because I do not have this problem, I do not know of this problem in any other agency under the jurisdiction of this committee.

But FDA every year seems to delight, seems to delight, frankly, in not cooperating in an open discussion of how funds are being used or how they will be used in the future that are appropriated by the committee.

So let us work on it.

Dr. FRIEDMAN. Thank you.

Senator COCHRAN. We cannot settle it right now, but I appreciate your listening to me.

Dr. FRIEDMAN. I appreciate the depth of feeling about this and the concerns that you are raising, and we take it very seriously.

Senator COCHRAN. Well, I appreciate that. This is going to be a tough year if we cannot get the reauthorization in a timely manner of the prescription drug user fees, and if you continue to assume things that you know are not going to happen, like \$132 million of new user fee authority. I do not think I am exaggerating when I am saying that is really a “pie in the sky” kind of assumption.

So what you are doing is you are putting this committee in a position of having to reduce the funds that you say you have got to have by \$132 million. We do not have the authority to grant you that request. And then you do not have any plan for dealing with that. Where is it going to come from?

So we have got serious problems. This agency has got serious problems, and that is another reason why I am concerned. We want to be helpful. You have got immense responsibilities under the law and by regulations you are making some new ones. Interesting.

Mr. SCHULTZ. Do you want us to talk a minute about the tobacco, the 27-year-old requirement, that was the other part?

Senator COCHRAN. Not really.

SUBMITTED QUESTIONS

There are others on the committee that may submit questions and we hope you will respond to them in a timely way, and we have additional questions as well that we will submit.

But let me thank you for your attendance and your submission of your request to the committee and your response to our questions today. Thank you very much.

Dr. FRIEDMAN. Thank you, sir.

[The following questions were not asked at the hearing, but were submitted to the agency for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR COCHRAN

FOOD SAFETY INITIATIVE

Question. The fiscal year 1998 request proposes a \$24 million increase over the fiscal year 1997 enacted level for the Administration's Food Safety Initiative. Of this amount, \$20 million is for the FDA's Foods program and \$4 million is for the Animal Drugs and Feeds program. What specific activities will be undertaken with the additional funds proposed for the Foods program and for the Animal Drugs and Feeds program as part of the Administration's Food Safety Initiative?

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Answer. FDA is requesting \$24 million in the fiscal year 1998 budget to begin implementation of a series of initiatives to reduce, to the greatest extent possible, the annual incidence of foodborne illness and resultant economic losses to consumers and industry by enhancing the safety of the nation's food supply. Meeting this goal involves the collaborative efforts of several agencies, including the Food and Drug Administration, the Centers for Disease Control and Prevention, the Environmental Protection Agency, and the United States Department of Agriculture. The goal is in concert with the objectives of the HHS strategic goals, Healthy People 2000, the CDC emerging infectious diseases initiative, the Vice President's National Performance Review, and the Office of Science Technology Policy's, "Meeting the Challenge," as well as other Presidential directives focused on enhancing the health and well-being of children and the elderly. This funding will provide for the initial steps toward achieving the long-term national goal of reducing the annual incidence of foodborne illness, and setting the groundwork for this multi-year, collaborative undertaking.

The need for this initiative is constantly growing. Although the U.S. food supply is unmatched in quantity and quality, foodborne illnesses threaten public health and contribute significantly to the escalating cost of health care. Of all the hazards associated with foods, microbial hazards account for 90 percent of the confirmed foodborne outbreaks and cases. Among the various contaminants that may cause foodborne illness are *E. coli* 0157:H7, *Salmonella enteritidis*, *Campylobacter jejuni*, *Toxoplasma gondii*, *Cryptosporidium parvum*, Norwalk virus, and chemical hazards such as methyl mercury.

The Council for Agricultural Science and Technology—a private, nonprofit scientific organization—estimated in its 1994 report entitled, "Foodborne Pathogens: Risks and Consequences," that between 6.5 and 33 million illnesses and up to 9,000 deaths occur every year in the United States, because of microbial contamination of food. Chemical hazards, on the other hand, more commonly cause chronic health effects, which are difficult to estimate. Hospital stays associated with microbial foodborne illnesses are estimated to cost society more than \$3 billion a year. The estimated total costs of foodborne illness are at least \$5.6 billion. Since foodborne chemical hazards often present chronic rather than acute health threats, specific estimates of their impact on health and the economy are not as readily available.

The costs of foodborne illness are borne by those who become ill and their families, coworkers, and employers, as well as the food industries, and taxpayers. Costs to stricken individuals include medical bills, time lost from work, pain and inconvenience. Food industry costs include possible product recalls, establishment closings and cleanup, and higher premiums for product liability insurance. Perhaps most costly in the long term is the loss of product reputation and reduced demand when an outbreak occurs and is publicized. These and other "defensive" industry costs of foodborne disease run in the millions of dollars annually and are, for the most part, entirely avoidable. Taxpayer costs include medical treatment for those who cannot afford it and higher health insurance premiums.

One indicator of the breadth of the problem posed by foodborne hazards is the increased number of FDA-regulated food product recalls because of life threatening bacteria—Class I recalls due to microbial contamination. The number of these recalls climbed from seventy-nine in 1988 to 378 in 1995. These recalls also impose an economic burden on industry and consumers. FDA estimates that the total annual recall costs for FDA-regulated products to industry and indirectly to consumers are roughly \$42 million.

Further, the food supply, as well as consumer tendencies and preferences, is changing in many ways that could contribute to an increased risk of foodborne illness. A generation of consumers who have grown up with the freezer and a microwave, have neither the experience or knowledge to always recognize or correct potentially hazardous food handling and preparation behavior. Vulnerable populations, such as immuno-compromised persons and the elderly, are continuing to grow in size. By the year 2020, twenty-five percent of the U.S. population will be sixty-five or older. Adding to this number are infants, hospitalized people, individuals receiving immuno-suppressive treatments, chronically ill people with diseases such as cirrhosis, and people receiving antimicrobial therapies, such as antibiotics. Also, there are approximately fifty to sixty thousand new cases of HIV/AIDs every year, and the number of cancer patients has increased markedly in the last twenty years. As a result, today, more than thirty million people are likely to be at high risk from foodborne microorganisms. Microorganisms are adapting to their environments, developing pathogenic characteristics and resistances to conventional food preservation and disinfection techniques that contribute to the incidence of foodborne illness, and new pathogenic strains continue to emerge, such as *S. enteritidis* phagetype 4. The food industry has evolved into a relatively small number of large producers making

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it possible for a contaminated product to be distributed nationally or even internationally. Also, the number of retail establishments processing foods on-site is growing rapidly.

In response to this growing problem, the Administration—through a coordinated FDA and CDC, USDA, and EPA effort—is planning a Food Safety Initiative to implement new, and bolster existing, food safety intervention measures. These efforts represent involvement by the key components of the Federal food safety system—Federal, State, and local public health agencies—and integrate elements pivotal to food safety such as surveillance, coordination, inspections, consumer and industry education, risk assessment, and research. The range of planned activities will lay a foundation of cooperation and communication to rapidly deal with emerging public health hazards. The overall benefit and outcome of this initial phase of the national Food Safety Initiative will be reduced incidences of foodborne illness and all of the benefits that carries with it, such as reduced health care costs for consumers and industry, reduced costs to industry in recalled product and loss of reputation, reduced productivity losses, and increased awareness and knowledge of appropriate behavior to combat foodborne illness.

I will provide, for the record, a table which outlines the specific activities and amount of funding for each.

[The information follows:]

Fiscal year 1998 budget—Food Safety Initiative

Foods Program:

Surveillance: Monitoring pathogen levels, support FoodNet foodborne illness surveillance sites	\$1,660,000
Coordination of outbreak response	550,000
Risk assessment: Risk assessment consortium, exposure assessment	3,950,000
Research: Analytical methods, pathogen control and preventive techniques, food handling	3,900,000
Inspections: Implement seafood HACCP, State partnerships, Lab certification	7,870,000
Education: Consumer/retail education	2,070,000
Subtotal, Foods	20,000,000

Animal Drugs and Feeds Program:

Surveillance	1,500,000
Research	2,500,000
Subtotal, Animal Drugs and Feeds	4,000,000

Total, FDA

Total, FDA	24,000,000
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Surveillance (\$3,160,000).—Surveillance and investigation of foodborne disease are powerful ways to detect new foodborne disease challenges, to determine what the specific food sources are, and to learn how best to prevent foods from becoming contaminated in the first place. The objectives of this funding are to: establish a new national early warning system for outbreaks of foodborne disease, enhance microbiologic monitoring and surveillance activities related to pathogen reduction, and improve the monitoring of layer hens and bulk liquid egg products for Salmonella contamination before pasteurization.

The effect of these efforts to detect foodborne illness outbreaks in combination with intervention efforts, such as product recalls, reduces the number of illnesses in the outbreak and generates health benefits as shown for the 1993 outbreak of *E. coli* 0157:H7 in hamburger. An estimated additional 800 illnesses were prevented because an in-place surveillance system detected the outbreak, which quickly triggered a recall of the implicated food and reduced the potential of health care costs.

FDA will expand the ongoing national surveillance of antimicrobial resistance from food producing animals to determine the impact of antibiotic drug use in animals.

—FDA's Center for Veterinary Medicine (CVM) in coordination with CDC, and USDA/ARS has developed a National Antimicrobial Susceptibility Monitoring Program for *Salmonella* and *E. coli* 0157:H7 isolates from both animals and humans. This monitoring program will be expanded with Food Safety Initiative, FSI, funds to include additional surveillance sites, new sources of isolates and *Campylobacter* isolates.

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- FDA in collaboration with CDC and USDA will develop a protocol for response activities and information dissemination as a result of findings from the surveillance system.
- Immediate follow-up will include outbreak investigations and field studies in response to “red-flag” events.
- FDA will develop a comprehensive education program to disseminate the findings from the monitoring program to all stakeholders.
- FDA will initiate collaborative international technology exchange and assist in the development of relevant international databases.

Coordination (\$550,000).—The goal of improved coordination of foodborne illness response, particularly in emergencies, at federal, state and local levels of government, is to ensure that responses are rapid and effective, and ensure the best use of government resources, while avoiding unnecessary duplication of effort.

The objective of this initial phase is to create, at the Federal level, an emergency response system which improves existing channels of communication and develops new lines of communication between the Federal agencies responsible for investigating foodborne illness. FDA’s role in initiating control and prevention measures (e.g., working with industry to remove implicated products from the market) is critical to the success of any response system. As a result of the Federal-Level Interagency Coordination Group managing responses and improving communication of critical data and information, these efforts should result in a more rapid identification of foodborne illness outbreaks and implementation of control measures.

Risk Assessment (\$3,950,000).—The goal of risk assessment is improved health risk estimates associated with microbial and chemical foodborne hazards to facilitate the development and evaluation of surveillance plans, risk reduction strategies, regulations targeted to specific hazards, implementation of HACCP practices, and research programs to enhance food safety.

This initial phase will: 1) establish a Risk Assessment Consortium to provide leadership, consistency, and transparency in risk assessment; 2) improve data and modeling techniques to assess exposure to microbial and chemical hazards, including animal drug residues, in the food supply; 3) begin development of improved and more standardized risk assessments to facilitate the ranking of food safety concerns to provide for better health protection and more efficient utilization of resources; and 4) provide a science-based level playing field in support of U.S. positions in international trade.

Favorable outcomes would include providing a foundation for developing better risk assessments, which would result in more focused surveillance and research efforts, and regulatory initiatives. The ultimate result is identification of trends in causes and sources of foodborne illness, and development of methods to rapidly identify specific sources in an outbreak. These two factors will shorten the time to identify an outbreak and its source, speed control measures into place, and prevent growth of the outbreak, illnesses and possible deaths. Even modest improvements in the existing system can yield potential savings to both industry and consumers of thousands, and even millions of dollars.

Research (\$6,400,000).—The goal of research initiatives is new, improved tools, screening methods, and analytical methods to more rapidly and accurately identify and characterize foodborne hazards, evaluate the effectiveness of surveillance initiatives and control and prevention strategies, conduct risk assessments, and verify effectiveness of preventive techniques such as HACCP.

This initial phase will make available new, rapid, sensitive, and accurate screening and analytical methods for microbial and chemical hazards to do the following: detect and identify the source of foodborne illness outbreaks in surveillance and monitoring activities; verify critical control points in HACCP programs; support development of educational materials; and provide scientific underpinning for the execution of FDA monitoring, regulatory, and enforcement activities to reduce the incidence of foodborne illness.

These efforts should enhance capability for identifying and monitoring changes in microbial resistance to a wide range of factors (e.g., heat, cold, acid, high salt), and develop/evaluate preventive techniques for use during production, handling, distribution, and storage processes, and enhance capability to detect and identify microbial and chemical hazards in settings such as the processing environment and in distribution. (This capability can be a basis for formulating preventive strategies and verifying controls in HACCP programs.) Further, this capability would improve the ability to detect and identify resistant microorganisms and identify determinants that may affect susceptibility and around which analytical methods and preventive techniques, (such as new effective cleaning and disinfection methods for facilities and heat-sensitive foods and new feed and food processing parameters), may be designed. Finally, development of new or improved screening and analytical

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methods to detect, identify, and quantify microbial and chemical hazards will permit rapid execution of the intertwined coordination, surveillance, inspection, education, and risk assessment elements of an efficient, effective food safety program.

Further, FDA will conduct research to better understand antibiotic animal drug resistance to limit the impact of antibiotic resistance on animal and human health:

- Identify and characterize the factors that led to the development of multiple drug (antibiotic) resistance in foodborne pathogens in farm and aquaculture animals;
- Investigate techniques for manipulating the microbial ecology of the intestinal tract of agricultural and aquaculture animals to prevent the development of antibiotic resistance or select for nonresistance.

FDA will expand research in the areas of prevention, reduction, and elimination of pathogens in animals and animal feeds. For *Campylobacter*, *Salmonella*, *Toxoplasma*, *E. coli* 0157:H7, and other Shiga-like toxin-producing *E. coli*, and *Cryptosporidium*, FDA and USDA, often in partnership with universities and industry, will:

- Expand research into the microbial ecology of foodborne pathogens and how initial colonization in animals can be prevented.
- Expand research on new methods to reduce or eliminate pathogenic microorganisms and mycotoxins from agricultural and aquaculture animals before slaughter or harvest, including the use of probiotics.
- Initiate research to develop new techniques for eliminating animal feeds as a source of foodborne pathogens.

Inspections (\$7,870,000).—The goal of inspections is more efficient and effective monitoring of the safety of the food supply.

This initial phase will: 1) more quickly implement the seafood HACCP regulations, expand the use of HACCP systems to non-seafood establishments, and work to apply HACCP principles to retail food service operations, as well as to the slaughter of animals used for food; 2) enhance Federal/State partnerships to ensure consistency in inspection technique across Federal, State, and local levels, to better coordinate with the States, and eliminate duplication of efforts; and 3) develop a laboratory certification program enabling private parties to test samples of food for adherence to food safety regulations.

Education (\$2,070,000).—The goal of education is to provide food safety education programs and materials to change unsafe food handling behavior used in the home and in retail and institutional food service operations.

This initial phase will: 1) develop more effective methods for providing food safety education materials and services to consumers and to food service operations, especially those providing food to populations at high risk in hospitals, nursing homes, assisted living facilities, child day care, and senior day care; 2) develop and initiate implementation of a national food safety education program for all segments of the retail food industry using the concepts set forth in the Food Code; 3) form an alliance, joining expertise of Federal, State and local health agencies, industry, and professional and trade associations to develop improved education activities on food safety issues, promotion of the Food code and/or the food safety parameters; and 4) develop education/communication techniques targeted to specific groups to overcome current barriers to communicating appropriate food safety behaviors to food service workers.

An estimated 50 million people are now reached with consumer information, only some of which is safe food handling information. It is anticipated that implementation of this phase of the initiative, along with the other elements of the initiative, will result in a significant increase in the number of consumers and food service workers being reached with food safety messages. But, more importantly, this initiative will target changed behavior as its goal rather than information dissemination as previous education initiatives have done.

Question. What is the fiscal year 1997 level of funds for FDA's food safety activities? Please indicate how much is currently being spent by program.

Answer. The \$24 million requested in the fiscal year 1998 budget would provide increased funding to FDA's Foods and Animal Drugs and Feeds programs, and their related field activities. For fiscal year 1997, the Foods program estimates expending nearly \$194 million on activities directly and indirectly related to the proposed Food Safety Initiative in the areas of chemical and microbiological safety of foods, and nutrient quality and food labeling. In the Animal Drugs and Feeds program, \$37.5 million is estimated to fund the traditional activities of preapproval evaluation and monitoring of marketed drugs and feeds which relate either directly or indirectly to the proposed Food Safety Initiative.

Question. The President's Food Safety initiative is described to involve the collaborative efforts of several agencies, including the Environmental Protection Agency,

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the Center for Disease Control, and the USDA. Does the success of this initiative rely on each of these agencies receiving the funding increases requested in the President's fiscal year 1998 budget?

Answer. The success of the initiative does depend upon each Agency receiving the funding increases requested in the President's fiscal year 1998 budget. The anticipated benefits and outcomes cannot be achieved by implementing only one or a few of the elements. There are many causes of foodborne illness, many points at which foods can become contaminated, and many factors that make some groups of people more susceptible than others. Therefore, no single measure alone could ensure as completely, the safety of all foods. While minimal improvements could be made with partial funding, the goals of reducing the incidence of deaths and illnesses associated with foodborne pathogens, as set forth in the Food Safety Initiative, could not be achieved.

Question. The FDA justification indicates that "The overall benefit and outcome of this initial phase of the national Food Safety Initiative is a reduced incidence of foodborne illness and all of the resulting benefits such as reduced health care costs for consumers and industry, lower costs to industry in recalled products and loss of reputation, reduced productivity losses, and increased awareness and knowledge of appropriate behavior to combat foodborne illness." How will this initial phase of the Food Safety Initiative achieve the benefits and outcomes you indicate and how will you measure your success in these areas?

Answer. The goal of the Food Safety Initiative is to reduce the incidence of foodborne illness to the greatest extent feasible. The activities outlined in the initiative build on previous Administration steps to modernize our food-safety programs and respond to emerging challenges. Our understanding of many pathogens and how they contaminate food is limited. For some contaminants, we do not know how much must be present in food for there to be a risk of illness. For others, we do not have the ability to detect their presence in foods. The public health system in this country has had limited ability to identify and track the causes of foodborne illness. Federal, state, and local food safety agencies need to improve coordination for more efficient and effective response to outbreaks of illness.

The fiscal year 1998 budget provides the first steps in achieving the overall benefits and outcomes. The Administration will initiate a strategic planning process to develop a plan for improving the food safety system over the long term. The process will facilitate the participation of all interested parties and provide extensive, structured discussions to develop strategies for achieving change and ways for measuring progress. We anticipate that over the long term improved surveillance is going to result in higher, but more accurate, outbreak numbers. Ultimately, progress and goal achievement can be measured based on declines in the number of foodborne illnesses and deaths, and declines in the number of outbreaks using the more accurate figures. In addition, more effective prevention and intervention programs, more rapid responses to outbreaks, increased inspection coverage, changes in behavior, and better detection and quantification methodologies, could all be measured as a means of determining the effectiveness of our efforts.

Through this Food Safety Initiative, as well as other Administration activities, the groundwork for planning future activities will be available to tackle some of the more difficult public health, resource, and management questions facing federal food safety agencies. The Administration recognizes that these initial phase actions will significantly improve the safety of the nation's food supply, but that a longer term strategy is also needed. The President has requested further information regarding longer term goals of the multi-Agency initiative which will be available soon.

Question. If this is the initial phase, what additional phases are planned and what additional funding will FDA require to carry out each phase of the President's Food Safety Initiative?

Answer. Beyond fiscal year 1998, at minimum, a constant level of funding would be required to assure whatever progress was achieved with the initial phases of the Food Safety Initiative are not lost. However, we have not determined exact long-term budgetary requirements, but would operate under the fact that the federal food safety agencies are committed to continuing to meet with stakeholders and ultimately developing a strategic plan for continuing to improve the food safety system. At the President's request, each agency is participating in an interagency group to develop longer-term strategies which should be completed soon.

FDA FOOD SAFETY RESPONSIBILITIES

Question. How many food processing plants does the FDA inspect annually? How does this compare to ten years ago? to five years ago? How many FDA-regulated plants are there?

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Answer. FDA uses a variety of establishment types to categorize the business activity of firms of regulatory interest in its Official Establishment Inventory. Since the term food processor is not one of these categories, we are defining food processors as plants categorized as manufacturers and repackers. In fiscal year 1987, FDA inspected 7,235 food processors, in fiscal year 1991 7,625, and in fiscal year 1996, 6,543.

There are almost 25,000 food and seafood manufacturers and repackers in FDA's Official Establishment inventory. Let me provide for the record, a table showing the historical numbers of repackers included in our inventory.

[The information follows:]

OFFICIAL ESTABLISHMENT INVENTORY—FOOD AND SEAFOOD MANUFACTURERS/REPACKERS NATIONAL TOTALS

Fiscal year	Food and seafood manufacturers and repackers count	Seafood manufac- turers and repack- ers count
1987	24,761	3,076
1991	24,059	3,286
1996	24,770	3,342

Question. Please describe FDA's inspection coverage of imported foods. Has the FDA enhanced its inspection coverage of imported foods over the past ten years? Is there increased concern over the safety of imported foods?

Answer. Commercial food products coming into the United States must be declared through Customs which automatically notifies FDA. FDA then takes one of several possible actions. First, the product may be released without examination, or second, FDA may physically examine the product at the dock, take samples for analysis in one of the agency's laboratories, or detain the product without physical examination. Products are detained without physical examination if we have previously had a specific problem with a product offered for import or with products from a specific firm in a foreign country.

In fiscal year 1996, FDA conducted approximately 55,142 wharf examinations and import sample collections, analyzed 19,515 samples, and detained approximately 6,872 products without physical examination.

The number of imported food products entering the United States has doubled over the last five years to approximately 2.2 million import entries per year. Meanwhile, wharf examinations and sampling of foods being offered for import into the United States have dropped by 50 percent in just the past four years. Given these changes, and the increased frequency of outbreaks such as hepatitis in frozen strawberries, there is increased concern over the safety of imported foods. The inter-agency Food Safety Initiative is the Administration's attempt to respond to this heightened concern.

Question. FDA is in the process of implementing a Hazardous and Critical Control Point (HACCP) system for the inspection of seafood. Would you please give us a status report on the implementation of this system. What level of funding is being allocated for this activity for fiscal year 1997? How much is included in the fiscal year 1998 budget request for implementation of seafood HACCP?

Answer. FDA's Seafood Hazard Analysis and Critical Control Point, or HACCP, regulations were published in December 1995 and become effective in December 1997. HACCP is a system of preventive controls for safety that is implemented by the industry. Each processor's HACCP system must follow several basic principles but otherwise may be tailored to the circumstances of that processor. FDA's role in this system is to issue minimum ground rules in the form of its seafood HACCP regulations, provide the industry and the public with information about the program, and technical assistance on how to develop and operate effective HACCP systems, verify through inspections that the industry is meeting its responsibilities as of the effective date, obtain corrections when those responsibilities are not being met, and evaluate the national program and fine tune it as necessary. I will provide, for the record, the status for each component of FDA's role in implementing Seafood HACCP.

[The information follows:]

The regulations.—The regulations were developed through a process involving extensive public input and comment. FDA's philosophy in developing the regulations was that (1) every commercial processor should be responsible for understanding the potential safety hazards associated with its products and maintaining reasonable

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controls to eliminate or minimize those hazards; and (2) FDA's regulations should not be so burdensome as to make the achievement of (1) impossible. FDA will be monitoring the program closely to determine whether this is the case.

Public information.—The Agency has engaged in an aggressive public information program to help the industry and the public generally understand HACCP and what will be expected as of the effective date of the program. FDA held public meetings in Boston, Baltimore, Tampa, New Orleans, Oakland, and Seattle, and also in individual FDA district offices. The regulations and explanatory materials have also been placed on FDA's home page on the Internet (<http://www.fda.gov>).

FDA has also been active internationally. Over 50 percent of seafood consumed in the U.S. is imported. Both imported and domestic seafood are subject to the regulations. FDA has attended conferences and made presentations at such venues as the World Aquaculture Society Meeting and Seafood Show in Bangkok, at Bombay and Cochin, India, in the Philippines, Singapore, Indonesia, and elsewhere. The Agency made a presentation for the staffs of 37 embassies in Washington, D.C. Several workshops for importers are scheduled in the near future at various sites around the country.

Technical Assistance.—FDA has provided technical assistance to the industry through written guidelines and training.

Written guidelines.—The seafood HACCP regulations are relatively short and general to allow for flexibility in the design of HACCP systems. Alone, however, the regulations provide processors with little detail on how to actually develop, install, and implement a HACCP system. Consequently, FDA developed the "Fish and Fishery Products Hazards and Controls Guide," which provides the Agency's best advice on safety hazards that are likely to occur on a product-by-product basis and on controls that are available for those hazards. The Guide was first issued in draft form with a public comment period and has now been published as a "First Edition." Additional public comments are being received and FDA will update the Guide to reflect changes as a result of these comments prior to the effective date of the program. The Guide will be revised as needed to reflect future comments received.

Training.—The regulations require that, within each processing operation, certain HACCP functions be performed by a trained individual or by someone with equivalent knowledge obtained through on-the-job training. The "Seafood HACCP Alliance" consisting of Federal agencies, State regulatory officials, the Association of Food and Drug Officials, academia, and industry trade associations, was formed for the purpose of developing a uniform, core curriculum for seafood HACCP training and to develop a cadre of trainers to deliver this course. The Alliance developed a 2½ day training course in basic seafood HACCP, including how to write a HACCP plan. The course was first offered to prospective trainers ("train the trainers") and is now being provided by those trainers to the industry for nominal cost (not exceeding \$150). It has also been taught to FDA's seafood inspectors. FDA estimates that about 2,000 individuals have now taken this course.

FDA then developed a follow-up course, solely for regulators, on how to audit a processor's seafood HACCP system. It was initially presented on March 26 and March 27, 1997 by satellite down link to sites around the country. About 800 Federal and State inspectors and other personnel participated in this initial offering. The course was repeated recently in Maryland, primarily for state personnel in that region. It is an interactive course with facilitators at each site.

Verification and Evaluation.—Once the program becomes effective, FDA will be responsible for verifying compliance, obtaining corrections, and evaluating the program as a whole. Internal preparations are underway on these matters. One way that FDA is preparing is by inviting processors with HACCP systems in place before the effective date to have these systems reviewed by FDA as a non-regulatory aspect of an otherwise regulatory inspection. Processors will receive helpful feedback and FDA inspectors will obtain valuable experience.

Leveraging.—To the extent that HACCP becomes a "common language" for both seafood processing and for inspections, it provides an opportunity for the leveraging of inspection resources, both domestically and internationally.

Domestic.—FDA is in the process of developing a model partnership agreement for seafood HACCP inspection and beginning negotiations with states toward entering into partnerships. HACCP provides a new opportunity for inspection partnerships with states through which FDA and the state regulatory agency could divide the inspection workload between them and then combine the results in a common database. Such partnerships would help avoid duplication of effort and, by pooling results into a national database, greatly enhance the credibility of the U.S. seafood inspection system both domestically and internationally.

International.—Several countries have requested that FDA determine that their HACCP-based regulatory systems for seafood are equivalent to the U.S. system

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based on the FDA seafood HACCP regulations. FDA is now reviewing whether equivalency does in fact exist for those countries. To the extent that HACCP becomes an international norm, it facilitates equivalency agreements between nations that trade in seafood. In essence, an equivalency agreement acknowledges that the regulatory systems of two countries provide the same level of protection to consumers, although the measures for achieving that level of protection may vary. Where equivalency has been determined to exist, consumers in an importing country have a better assurance of safety than would be realistically possible solely through sampling at ports of entry. Trade is also promoted because equivalent countries do not need to engage in rigorous sampling of each other's products. Finally, equivalency agreements allow countries to focus their limited regulatory resources toward countries where equivalency does not exist.

Molluscan shellfish.—Last year, the Interstate Shellfish Sanitation Conference adopted virtually the entire FDA seafood HACCP regulation for the purpose of applying it to the processing of raw molluscan shellfish. This year, the Conference is expected to complete that effort by revising its Manual of Operations to make it compatible with HACCP and HACCP-based inspection.

FDA estimates that during fiscal year 1997, approximately \$4.7 million will be spent on preparation activities for the implementation of Seafood HACCP. Actual implementation of Seafood HACCP will begin during fiscal year 1998. If the Food Safety Initiative is funded, FDA anticipates spending a total of \$26.8 million through this new source of funding plus a redirection of existing funds. With Food Safety Initiative funds, and the addition of new inspectors for Seafood HACCP, FDA estimates that approximately 1,000 high risk firms will be inspected in fiscal year 1998. The Food Safety Initiative will allow FDA to annually inspect the entire inventory of 3,300 firms by the year 2000. Significant results of the additional resources will not be seen during the first year of implementation, during which time, the new inspectors will be hired and trained.

Question. How often are seafood plants inspected by the FDA?

Answer. In fiscal year 1995 FDA inspected about 45 percent of the seafood inventory. In fiscal year 1996 FDA inspected about 46 percent or 1,546 facilities. This is a dramatic increase from the 28 percent of the 936 manufacturers or processors inventory that was inspected in fiscal year 1987.

Question. I understand that the FDA is considering the implementation of HACCP for other food commodities. Is this true? Has the industry been involved in FDA's plans?

Answer. FDA has published an Advance Notice of Proposed Rulemaking—ANPR—asking for public comment about whether and how the Agency should develop regulations that would establish requirements for a new comprehensive food safety assurance program based on a HACCP approach for both domestically produced and imported foods other than seafood. Our goals in establishing additional food safety regulations would be to make the food supply safer through prevention of food safety problems, enable FDA and its State and Local counterparts to make more efficient use of the existing resources devoted to ensuring food safety, and enhance the ability of the Federal Government to provide consumers with the assurance they seek that the U.S. food supply is safe. The comments received have been compiled and summarized, and are being considered by the Agency in determining the next steps in FDA's food HACCP program.

FDA invited the food manufacturing industry, through an announcement in the Federal Register, to participate in a voluntary HACCP Pilot Program. Seven volunteer firms met the stated criteria and were accepted into the pilot. The pilot program has been completed with five of the original participants. Several of these firms have advised FDA that they are adopting HACCP corporate-wide and have invited FDA to periodically review operations at the additional sites in conjunction with corporate audits. FDA is recruiting additional participants to ensure the pilot program will include a broad spectrum of food types, geographic locations, firm sizes, and types of food safety hazards.

In addition, FDA held a public meeting in December, 1996, to review the current science, including technological and safety factors, relating to fresh juices and to consider any other measures necessary to provide safe fruit and vegetable juices. Public testimony was provided and interested persons were given an opportunity to submit additional written comments. FDA intends to initiate rules providing procedures for the safe and sanitary processing in the manufacture of fruit and vegetable juice through the application of HACCP principles and to require firms to use HACCP systems in the manufacture of fruit and vegetable juices. A system of preventive controls is widely recognized as the most effective and efficient way to ensure that food products are safe.

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YOUTH TOBACCO PREVENTION INITIATIVE

Question. Of the \$34 million proposed for fiscal year 1998 to implement FDA's final rule for the regulation of nicotine-containing tobacco products, how much is for outreach and how much is for enforcement?

Answer. Of the total \$34 million proposed for fiscal year 1998 to implement FDA's final rule for tobacco products, \$10 million will be used for outreach activities. The remaining \$24 million will be used for enforcement, the bulk of which will be provided to the states via contracts with state and local agencies.

Question. What specific outreach activities will be carried out and what is the cost of each?

Answer. In fiscal year 1998, we plan to intensify our outreach efforts to educate the retail community and the public about the age and photo ID provisions and to encourage retailers to comply with these measures. We plan to do a mailing to hundreds of thousands of retailers each quarter informing and reminding them of their responsibilities under the regulation. Further, in response to retailers' requests, we plan to print color posters for retailers to place in their stores explaining to customers the new requirements and urging customers under 27 to have their ID ready when buying cigarettes or smokeless tobacco. These posters will be printed in English and in Spanish and will be made available for free to retailers and others calling the hotline. FDA also will print, promote, and disseminate brochures for retailers and the general public and will develop and place exhibits at events attended by retailers, public health officials, and others. At the point at which FDA signs a contract with a new state to conduct compliance checks, FDA plans to alert retailers to the checks and remind them to comply with the age and photo ID provisions. Also, in states with whom FDA has contracted, FDA plans to place billboard, print, and radio ads in English and in Spanish informing retailers and the public that retailers must not sell to anyone under 18 and must card anyone under 27. Further, FDA will update the public on the extent of compliance it is achieving in different states. FDA also will develop materials for young people informing them about the new regulation and the serious public health problem it seeks to address. We will work with schools to disseminate videos, posters, brochures, and other materials to help discourage young people from attempting to purchase cigarettes or smokeless tobacco.

Approximately half of the outreach funding will be spent on educating retailers about their responsibilities via mailings to retailers, in-store posters, brochures, exhibits, videos and ads. The other half will be spent trying to discourage young people from buying cigarettes and smokeless tobacco and informing parents, teachers, state and local health officials about the new regulation.

Question. What specific enforcement activities will be conducted and what is the cost of each?

Answer. The bulk of the \$24 million will be spent on contracts with state and local officials for the enforcement of the final tobacco regulation. Remaining enforcement activities will primarily consist of follow-up actions based upon the compliance checks conducted under contract by state and local officials.

Question. What level of funding will be provided to State and local officials to enforce the rule? Will all State and local governments receive funds? If not, which State and local governments will receive funds? How will these be selected? What level of funding will each receive? What enforcement activities will these governments be required to carry out?

Answer. FDA has identified 10 states that have been asked to submit proposals for contracts. Money for the contracts has been set aside from the \$4.9 million allocated out of fiscal year 1997 funds. Other states will remain free to submit proposals and, if money is available after the first ten contracts are signed, additional contracts can be negotiated. With the money included in the fiscal year 1998 request, FDA expects to be able to contract with all states that submit proposals.

Question. The appropriations justification indicates that seven years after implementation of the rule, FDA's goal is a 50 percent reduction in the use of tobacco products by children and adolescents. How will FDA measure its success in meeting this goal?

Answer. In the preamble to the proposed rule, FDA indicated that it would measure smoking and smokeless tobacco rates by reference to the Monitoring the Future Project—MTFP—data, an annual survey performed by the University of Michigan, Institute for Social Research. The survey measures, among other things, cigarette and smokeless tobacco use by 8th, 10th and 12th graders. In addition, it looks at two measures: usage in the last 30 days, and regular usage. FDA intends to use some or an average of some of these data.

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Question. The fiscal year 1998 budget indicates that FDA will spend \$4.9 million on tobacco in fiscal year 1997. How will this \$4.9 million be spent?

Answer. Of the \$4.9 million, \$2 million will be used to fund State Contracts, and \$1.9 million will be used for FTE support. The balance will be used to fund Outreach and Education efforts.

Question. Provide for the record an object class breakdown of FDA's \$4.9 million fiscal year 1997 level for tobacco and the \$34 million proposed for fiscal year 1998.

Answer. I would be happy to provide the requested object class information for fiscal years 1997 and 1998 for the record.

[The information follows:]

YOUTH TOBACCO PREVENTION INITIATIVE

[Dollars in thousands]

	1997 estimate	1998 estimate
Personnel compensation and benefits	\$1,713	\$1,801
Travel	50	50
Rent and utilities	60	40
Printing	500	500
Other services (contracts)	2,522	31,569
Supplies and materials	35	30
Equipment	20	10
Total	4,900	34,000

Question. What additional funding and staffing will be required to implement FDA's tobacco regulation in subsequent fiscal years? Please provide funding and staff year requirements by fiscal year.

Answer. FDA has not yet fully developed projections beyond fiscal year 1998.

ARKANSAS REGIONAL LABORATORY

Question. What is the status of Phase I construction of the Arkansas Regional Laboratory which was funded for fiscal year 1997?

Answer. Proposals for the construction of the Arkansas Regional Laboratory, or ARL, were received on April 30, 1997. It is anticipated that the Phase I construction contract will be awarded during the summer of 1997. Construction of the ARL Phase I would then begin in fall 1997. The fiscal year 1997 appropriation included \$13,000,000 for Phase I construction of the ARL. Phase I begins construction and provides the ARL building, foundation, substructure, superstructure, exterior enclosure, and roofing. Major building systems, such as fire protection, HVAC, electrical, and some site work, are also included.

Question. The fiscal year 1998 request includes \$14.550 million for Phase II construction of the Arkansas Regional Laboratory. What is the schedule for Phase II construction of this project? Will the funds requested be sufficient to complete Phase II of the project?

Answer. It is anticipated that the construction contractor will receive a Notice to Proceed on construction of Phase II of the ARL in the fall of 1997, with the completion scheduled in the fall of 1999. Occupancy is projected for early 2000. The fiscal year 1998 request for \$14,550,000 will complete the laboratory portion or Phase II of the construction of the ARL, by completing building systems and providing laboratory fit-out. The fiscal year 1997 appropriation of \$13,000,000 for Phase I of ARL will support construction of the building, foundation, substructure, superstructure, exterior enclosure and roofing as well as major building systems such as fire protection, HVAC, electrical and some site work. The construction bid process for Phase I is underway and will determine the exact amount needed to complete the ARL fit-out.

Question. How many additional phases of this project are planned? What is the cost of each phase and what funding will be required in each subsequent fiscal year to complete the project?

Answer. Phase III, initially estimated at \$9,800,000, will provide the renovation of the existing Building 50 in its entirety and completes the common ORA/NCTR administrative and support area. The complete ORA/NCTR project consists of a joint animal quarantine facility, renovated space located in NCTR Building 14 to accommodate ORA's dioxin analytical program prior to ARL construction, and construction

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of Phases I, II, and Phase III to complete ARL, building 50 renovation and common area for ORA/NCTR administration and support.

The current cost projections are based on the Architect/Engineer estimate. The construction bid process is underway and when complete will provide an exact amount for the project. Additionally, FDA will fund an estimated \$2.43 million for ARL and Building 50 furniture as well as installing telecommunications, computers and security systems.

SALARIES AND EXPENSES REQUEST

Question. The fiscal year 1998 appropriations request for FDA's salaries and expenses account is \$820 million, \$67.5 million below the enacted fiscal year 1997 appropriations level. This net reduction does not include other offsetting reductions to accommodate the \$24 million increase proposed for the food safety initiative and the \$29.4 million increase proposed for tobacco. If these are considered, the reduction in appropriations for FDA's ongoing activities funded as part of the salaries and expenses account totals \$122.4 million—nearly a 15 percent decrease below the fiscal year 1997 level. This fiscal year 1998 salaries and expenses appropriations request will require the FDA to reduce staff by 1,120 full-time equivalent positions below the fiscal year 1997 level.

While the President's budget proposes that this reduction in the appropriation be offset by new user fees generating \$132 million in collections in fiscal year 1998, these new fees rely on the approval of the President's legislative proposals. In short, if the House and Senate authorizing committees do not recommend legislation establishing these fees, the FDA is going to be \$132 million short of the amount it proposes to need for fiscal year 1998. Those additional resources cannot be assumed by this Committee. In addition, collections assumed in the President's budget from two existing fees—the Prescription Drug User Fee Act and the Mammography Quality Standards Act—require reauthorization for fiscal year 1998. If the House and Senate authorizing committees fail to reauthorize these fees, an additional \$105,179,000 in collections assumed in the fiscal year 1998 budget request will not be available to the FDA.

What will be the impact on FDA's ongoing activities if this Committee approves the President's appropriations request for fiscal year 1998, which is 8 percent below the fiscal year 1997 enacted level and nearly 15 percent below the fiscal year 1997 level if the requested increases for food safety and tobacco youth prevention are approved?

Answer. The President's Budget assumes \$244 million in user fees, of which \$237 million would be new or re-authorized. The Budget was prepared on the reasonable assumption that those fees could be authorized, consequently allowing some budget authority savings to occur.

The Administration's budget for FDA should be viewed in total, keeping in mind that it fits in with the President's overall balanced budget plan by fiscal year 2002.

Question. If new user fees are not approved and the FDA's direct appropriation for its salaries and expenses account is frozen at the fiscal year 1997 enacted level, would FDA still propose that funding be shifted from its other activities to provide the increases requested for fiscal year 1998 for the food safety and youth tobacco prevention initiatives? If so, from which activities funded through the salaries and expenses appropriation would you suggest this funding be taken to accommodate these increases?

Answer. I am unable, at this time, to prioritize among the new funding included in the budget versus our traditional areas of concern. On the one hand, improving the safety of the food supply and keeping tobacco out of the hands of children are both initiatives of the utmost importance, and are very high priorities of the Administration. On the other hand, FDA's traditional activities of promoting and protecting the public health through premarket review and postmarket assurance are also of vital importance.

Question. Assuming an overall freeze on the salaries and expenses appropriation at the fiscal year 1997 level, please provide a breakdown of FDA's fiscal year 1998 spending requirements using the breakdowns contained in the Senate report on the fiscal year 1997 appropriations bill and adopted by the conference committee.

Answer. Because of the importance of the new funding requests and the need for continuing funding of our traditional programs, I am unable, at this time, to provide a breakdown of fiscal year 1998 spending requirements. We are now considering different possible scenarios involving the new initiatives included in the budget as well as our traditional areas of concern. The proposed new initiatives are of the utmost importance, and are very high priorities of the Administration, as are FDA's traditional activities of promoting and protecting the public health.

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Question. The fiscal year 1998 request assumes the reauthorization of the Prescription Drug User Fee Act, assuming collections from these fees of \$91.204 million for fiscal year 1998, as compared with fiscal year 1997 fee collections of \$87.528 million. Is this estimate of Prescription Drug User Fee Act collections for fiscal year 1998 based on an extension of current law or does it assume changes in the current law authorizing these fees?

Answer. Since the present statute sunsets on September 30, 1997, the current law authorizing fees will expire. A new statute, either an extension of PDUFA or another statute, would be required for FDA to collect fees in 1998. That said, the estimate included in the fiscal year 1998 budget is based on the legislation as currently authorized.

Question. What is the current fiscal year 1997 base appropriations level for drug review and approval activities which are enhanced by collections from Prescription Drug Act user fees? What is the base level assumed in the fiscal year 1998 budget?

Answer. PDUFA, as currently authorized, provides that fees shall only be collected and available for increases in the costs for the process to review new human drug applications, defined in the Act, above the level of costs for the process in fiscal year 1992 multiplied by an adjustment factor. Using data from the fiscal year 1998 President's Budget historical tables for domestic discretionary budget authority, we have calculated the fiscal year 1992 base obligations multiplied by the appropriate adjustment factor to arrive at the base funding estimate necessary to collect fees. The base funding estimate necessary to collect fees is \$125,794,000 for fiscal year 1997, and \$128,833,500 for fiscal year 1998.

Question. What would be the consequences of not reauthorizing the Prescription Drug User Fee Act?

Answer. The consequences of not reauthorizing this program would include a serious erosion in the timeliness that safe and effective new therapies become available to the public. PDUFA has been a very successful program primarily benefiting the public. The Agency and industry have benefited substantially also from a commitment to excellence in the review of applications, and the predictability of improved Agency performance. Without reauthorization, FDA would be forced into a rapid downsizing of the program, would likely lose many of its most talented employees, and the morale of those remaining would be very low. Both would increase review times and backlogs substantially.

Question. What would be the consequences of not reauthorizing the Mammography Quality Standards Review Act?

Answer. FDA is charged with administering the provisions of the Mammography Quality Standards Act of 1992, or MQSA, which was passed with the primary objective of ensuring that all women have access to safe and effective mammography services. The MQSA requires uniform national quality standards for mammography facilities, and that these facilities be accredited by an approved accreditation body and certified by the Secretary of Health and Human Services—and carried out by delegation to FDA—as meeting quality standards. Under MQSA, facilities must be inspected at least annually by specifically trained and credentialed Federal or state inspectors. Inspections include assessments of image quality, beam quality, average glandular dose, and other measurements. MQSA also requires a National Mammography Quality Assurance Advisory Committee to advise FDA about mandatory minimum quality standards, standards for federally-supervised state or private non-profit accreditation programs, and certification and enforcement programs.

If MQSA is not reauthorized, the quality improvements made by FDA under MQSA to mammography will be lost. Mammography is the only proven means to detect breast cancer early and save a woman's life. Prior to MQSA, many states did not have standards for quality, nor did they inspect mammography facilities to ensure quality. Fourteen percent of facilities studied in 1992 did not pass image quality tests when surveyed jointly by FDA and the States. Under MQSA today, 99 percent of mammography facilities meet the requirements of this important test. In addition, all facilities now must meet baseline standards and are inspected by FDA trained inspectors. Accordingly, without reauthorization, the gains of mammography quality for American women may be lost and the effectiveness of mammography for early detection of breast cancer, in all likelihood, would substantially decrease. Moreover, the benefits to be gained from the new regulations to be published at the end of fiscal year 1997 would not be realized.

Since enactment, FDA has conducted numerous activities to implement MQSA. For the record, I would be happy to provide a list of activities undertaken during fiscal year 1996.

[The information follows:]

Trained and certified inspectors to bring the total number to 250.
Conducted 8,864 facility inspections.

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Issued more than 5,000 facility certificates.
Fully implemented the inspection fee filing process to recover costs of MQSA non-governmental entity inspections.
Conducted three meetings of the National Mammography Quality Assurance Advisory Committee to share comments, revise the proposed final regulations, and pursue subcommittee goals.
Received and summarized over 8,000 comments by the end of the year.
Proposed final regulations which were published on April 3, 1996.
Implemented an Inspector Audit program developed as part of Inspector Quality Assurance.
Audited 65 percent of the inspectors by year's end.

To continue, in fiscal year 1997, FDA will analyze and consider all public comments received regarding the proposed final regulations published in the Federal Register and develop appropriate final regulations. FDA expects to publish the final regulations by the end of fiscal year 1997. If MQSA is reauthorized, fiscal year 1998 would be devoted to transitioning to implementation of the new regulations. For example, FDA would revise the facility inspection procedure to be in accordance with the final regulations and would train the inspectors on these changes. An outreach effort would also be developed to ensure that facilities are aware of the changes resulting from the implementation of the final MQSA regulations.

The General Accounting Office, or GAO, issued a report, in January 1997, concluding that FDA's inspection program is having a positive effect on the nation's more than 9,000 mammography facilities and that the facilities show a growing compliance with mammography standards. The first year's inspections showed that 80 percent of facilities had either no violations or minor ones, and that only two percent had violations serious enough to warrant a warning letter from the FDA. Second year inspections have shown further improvement. In particular, the serious violations identified during the first year have not recurred in the vast majority of facilities where they were initially found.

Mammography training workshops for mammography facilities organized by a team from FDA, the American College of Radiology, and program directors of the Conference on Radiation Control, were selected for Vice President Al Gore's Hammer Award on October 30, 1996. The award winning workshops, whose organization required exceptional effort and teamwork, were designed to improve the technical skills of mammography facilities' personnel, and thereby advance the goal of MQSA to make all mammograms taken in this country of the highest possible quality, in order to enhance breast cancer detection and treatment.

Question. Please provide for the record details on the specific new user fees proposed for each of the following areas: food additive petitions, generic drugs, over-the-counter drugs, animal drugs, medical devices, import inspection, and postmarket surveillance activities (foods and cosmetics, human drugs, biologics, animal drugs and feeds, and medical devices).

Answer. I would be happy to provide a summary of the new user fees proposed in the President's fiscal year 1998 budget request, plus some additional information regarding specifics on each of the user fees, where applicable. The information provided serves as a useful starting point for any upcoming negotiations on the proposed user fees among FDA, Congress, and the affected industries. These points are subject to change based on the direction of any discussions regarding these user fees.

[The information follows:]

Summary of proposed user fees—Fiscal year 1998 budget

Food additive petitions	\$12,543,000
Generic drugs	¹ 18,000,000
Animal drugs	10,100,000
Medical devices	25,000,000
Import inspection	15,000,000
Establishment postmarket surveillance activities	51,000,000
Foods and cosmetics	(19,024,000)
Human drugs	(7,508,000)
Biologics	(2,233,000)
Animal drugs and feeds	(2,493,000)

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Medical devices	(19,742,000)
Total fees	131,643,000

¹In the fiscal year 1998 budget request, the estimate for Generic Drug user fees was \$13 million, and a separate \$5 million user fee for Over-the-Counter (OTC) drugs was included. However, because fees are already charged for NDA's for OTC switches under PDUFA, this \$5 million was moved to Generic Drugs in the Administration's proposed legislation for a new total of \$18 million.

The industries regulated by FDA derive valuable benefits from some FDA activities, including increased customer confidence in their products and significant protection from liability. FDA's reputation also improves the competitive position of American firms in overseas markets. The President's budget proposes that the regulated industries contribute a share of FDA's cost of ensuring the safety and effectiveness of their products. The following are the types of user fees, by program area, being proposed by the Administration. We intend to work with Congress, industry and other affected parties to develop these or other proposals to achieve informed consideration of proposed user fees, with appropriate performance measures and goals, and to ensure necessary funding for important FDA public health activities in fiscal year 1998.

Foods—\$46.6 million

Proposals include: premarket approval activities for food and color additive petitions submitted pursuant to sections 409, 721, 201(s), and 701(a) of the FD&C Act (\$12,543), to support FDA import monitoring activities (\$15,000), and to partially fund postmarketing regulatory activities (\$19,024), as covered by section 704 of the FD&C Act.

Premarket: Petitions filed pursuant to section 704 of the FD&C Act.
Imports: Support of FDA Import Monitoring Activities.

Drugs—\$25.5 million

Proposals include: review of original generic drug product applications (\$18,000), submitted pursuant to section 505(j) of the FD&C Act, and to partially fund FDA's Human Drug postmarketing regulatory activities (\$7,508), as covered by section 510 of the FD&C Act.

Generic Drugs: A one-time, comprehensive user fee for each original generic drug product application, for those applications submitted pursuant section 505(j) of the FD&C Act.

Biologics—\$2.2 million

Proposals include: partially funding postmarketing regulatory activities (\$2,233).

Animal Drugs—\$12.6 million

Proposals include: review of premarket applications (\$4,000), FDA activities which substantiate that industry's clinical and non-clinical investigations are properly conducted (\$6,100), as covered by section 512 of the FD&C Act, and to partially fund other postmarketing regulatory activities (\$2,493).

Premarket Approval of Animal Drugs and Feed Additives: Ensure new animal drugs and feed additives are safe, effective, properly formulated and manufactured.

Fees would be charged to applications submitted pursuant to section 512 of the FD&C Act.

Drug Experience Report Evaluations: Used to substantiate that industry's clinical and nonclinical investigations are properly conducted under section 512 of the FD&C Act.

Medical Devices—\$44.7 million

Proposals include: activities related to review and evaluation of premarket approval applications, premarket notification (510(k)'s), and investigational device exemptions (IDE's) for all medical and radiological devices to ensure that new devices meet the statutory requirements prior to commercial marketing (\$25,000), submitted pursuant to sections 510 and 515 of the FD&C Act, and to partially fund postmarketing regulatory activities (\$19,742), as covered by section 510 of the FD&C Act.

Premarket Approval of Applications and Notifications

Review and Evaluation of Premarket Approval Applications, Premarket Notification (510(k)'s) and Investigational Device Exemptions (IDE's) for all medical and radiological devices.

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Ensure that new devices meet the statutory requirements prior to commercial marketing.

Postmarket Regulatory Activities—Across Programs

Based on the Agency's Official Establishment Inventory (OEI).

Used to Offset a Portion of FDA's Postmarket Activity Expenses.

For Postmarket Regulatory Activity Fees we have determined a fee of about \$550 per establishment, which would be applied as follows:

- 35,369 Food and Cosmetics Establishments
- 13,958 Human Drug Establishments
- 4,151 Biologics Establishments
- 4,635 Animal Drug and Feed Establishments
- 36,703 Medical Device Establishments

The amount of the fee to be collected in most cases will need to be determined in negotiation with FDA's many constituents, as well as the Congress. It would be premature for those negotiations to presuppose specific fee amounts at this time. However, where possible, we have made every effort to provide some of the information requested.

The fiscal year 1998 budget request includes a total amount of fees for medical devices of \$25 million. The split by application type, as contained in the Administration's legislation is: \$56,522 for premarket applications, \$7,717 for supplements with data required, \$4,891 for supplements without data required, and \$3,478 for 510(k) applications.

Consistent with current practices under PDUFA and MQSA, we would initially recommend similar timing of fee collections. For instance, any application fees would be collected at the time of submission, any import fees would be collected at the point of entry, and any establishment fees would be collected at the beginning of the fiscal year.

For postmarket activities, based on the Agency's Official Establishment Inventory (OEI), FDA determined the number of establishments by program area, excluding warehouses, and calculated that \$550 per establishment would be needed to reach the \$51 million figure estimated in the fiscal year 1998 budget request.

Below is a table reflecting the estimated fee amount from fiscal year 1998, including the approximate percentage of the existing program that the proposed user fee would cover divided into our core activities of premarket review and postmarket assurance:

Activity area for proposed fee	Estimated amount of fee (from fiscal year 1998 budget)	Estimated budget amount in fiscal year 1997 (rounded to nearest \$100,000)
Premarket:		
Food additive petitions	\$12,543,000	\$12,600,000
Generic drug applications	18,000,000	36,000,000
Animal drug applications	4,000,000	16,000,000
Medical device applications	25,000,000	50,000,000
Postmarket:		
Animal drug activities	6,100,000	18,300,000
Food imports	15,000,000	45,000,000
Establishments	51,000,000	153,000,000

Question. What performance goals will be established for each of the proposed new user fees listed above? For each, please describe how these performance standards differ from those FDA is now achieving and provide the fiscal year 1997 level of funding for each activity.

Answer. Many of the specifics for each of the new user fees will be determined as the result of negotiations among FDA, Congress, and the affected industries. To speculate on exact performance goals for these user fees would be premature at this point. FDA is, however, developing performance measures for its activities in total—as mandated by the Government Performance Results Act—for inclusion in the fiscal year 1999 budget.

Question. For each of FDA's existing user fees, please provide user fee collections and related obligations for each of the last five fiscal years.

Answer. I would be happy to provide that information.

[The information follows:]

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USER FEE COLLECTIONS FOR FISCAL YEARS 1992–96

[In thousands of dollars]

	Fiscal year—				
	1992	1993	1994	1995	1996
Prescription Drug User Fee Act of 1992 (PDUFA) ¹		\$28,532	\$53,730	\$70,954	\$82,318
Mammography Quality Standards Act of 1992 (MQSA)	N/A			20	12,745
Certification Fund	4,320	4,075	3,867	4,875	4,490

¹ Reflects fees collected in fiscal year, including fees collected for applications received in previous years.

USER FEE OBLIGATIONS FOR FISCAL YEARS 1992–96

[In thousands of dollars]

	Fiscal year—				
	1992	1993	1994	1995	1996
Prescription Drug User Fee Act of 1992 (PDUFA)		\$8,949	\$39,951	\$74,064	\$85,053
Mammography Quality Standards Act of 1992 (MQSA)	N/A	N/A	N/A	N/A	8,577
Certification Fund	3,681	3,392	3,513	3,978	3,964

RENTAL OF SPACE

Question. The fiscal year 1998 request proposes the fiscal year 1997 level of \$46.294 million for FDA's payment to the General Services Administration for space rental and related costs. Why is no increase proposed?

Answer. Competition for increases in scarce Federal funding dollars has provided higher priority to public health program improvements. Again this year, the President's budget request is for an amount less than the actual GSA rent bill. If FDA's rent payments to GSA are not limited as they have been in recent years, FDA would have to divert further critical program resources to pay the rental charges unless Congress raises our Rental Payments appropriation level to meet our actual charges.

For your information we are providing a four-year chart of the bills associated with the Rental Payments, the FDA Appropriation, and the allowance for FDA's Building Delegation. These bills reflect the total amount the General Services Administration bills FDA for the buildings which fall under the Rental Payments FDA Appropriation. The chart further illustrates the importance of the limitation placed on the amount of annual rent paid by FDA to GSA.

[The information follows:]

AMOUNTS OF BILLS FOR RENTAL PAYMENTS TO GSA

[Dollars in millions]

Location	Fiscal year—			
	1995	1996	1997 *	1998 * 7
GSA Rent Bills:				
FDA direct	\$55.0	\$60.5	\$71.5	\$74.9
Parklawn Area ¹	7.5	7.6	8.7	8.9
Southwest Complex ²	0.7	0.7	0.7	0.7
Total GSA rent billed to FDA	63.2	68.8	80.9	84.5
Rental payments to GSA, FDA—Appropriations Account— and total paid to GSA ³	46.3	46.3	46.3	46.3

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AMOUNTS OF BILLS FOR RENTAL PAYMENTS TO GSA—Continued

[Dollars in millions]

Location	Fiscal year—			
	1995	1996	1997 *	1998 * ⁷
Building delegation allowance included in Appropriations				
Account for buildings maintained by FDA	4 [4.0]	5 [4.0]	6 ** [4.6]	7 ** [4.8]

* Estimated Total GSA Rent.

** Includes MODULE II

¹A separate GSA rent bill which currently includes 5600 Fishers Lane (Parklawn), 12420 Parklawn (Park), and 370 WHSE (Tech Center) which is billed to FDA on a pro rata share by HHS/Program Support Center (PSC).

²A separate GSA rent bill which includes 330 C Street (Switzer) and 11400 Rockville Pike (Rockwall) which is billed to FDA on a pro rata share by HHS/PSC.

³GSA Rental Payments, FDA, appropriations account.

⁴Authorized allowance for reduction in GSA rent under Treasury, Postal Service, Executive Office of the President and Independent Agencies Appropriation Act, Public Law 103–329, Section 611.

⁵Authorized allowance for reduction in GSA rent under Treasury, Postal Service and General Government Appropriation Act, 1996, Public Law 104–52, Section 611.

⁶Authorized allowance for reduction in GSA rent under Omnibus Appropriation Act of 1997. Public Law 104–208, Section 611.

⁷Note the 1998 estimate for the total GSA Rent bill includes a three percent inflation plus an allowance for adjustments in projected space assignments. In addition, the estimate for the 1998 Building Delegation account includes 2.7 percent inflation based on a memo received from GSA/PBS, June Huber, Assistant Commissioner for Portfolio Management.

Question. Does this reflect the actual cost to the GSA for space rental and related costs for programs and activities of the FDA pursuant to Public Law 92–313? What does Public Law 92–313 provide?

Answer. The requested amount of \$46.3 million reflects the amount to be paid to GSA, but does not reflect the actual amount billed by GSA. Public Law 92–313, “The Public Buildings Amendments of 1972,” as amended, provides for the financing acquisition, construction, alteration, maintenance, operation, and protection of public buildings and for other purposes. For the record, I would be happy to provide a quote from the funding section:

[The information follows:]

“The financing mechanism for Public Building Service (PBS) activities is the Federal Buildings Fund, which began operations at the start of fiscal year 1975. The Public Buildings Amendments of 1972 (Public Law 92–313) authorized GSA to finance government real property management activities through user charges set at commercially-comparable rates and collected from agencies occupying space. This rental income is deposited into the Federal Buildings Fund, with income in excess of operating expenses used to finance new construction and repair and alteration projects. In recent years, construction funds have been supplemented by direct appropriations to the Federal Buildings Fund and by increases in GSA’s borrowing authority.”

“The fund is subject to Congressionally-imposed limitations on the amount of its revenue that can be spent on any of its authorized activities. Of the approximately \$5 billion in rent revenue that PBS receives, almost one-half is for payments to the commercial real estate market for leased space, which comprises 48 percent of the inventory.”

One example of the operation of this fund for buildings which GSA leases is the Parklawn Building in Rockville. GSA has leased this building for approximately 25 years from a commercial lessor, for occupancy by several agencies of the Public Health Service. In this case, the agencies each pay GSA their share of GSA’s rental rates, which for FDA is currently about \$8 million, and the majority of these funds are then paid by GSA to the building owner.

A different example is Federal Building 8 at 200 C Street in South West Washington. Originally envisioned as housing all of FDA, this building was constructed with Federal funds and occupied in 1962. It now houses the majority of the Center for Food Safety and Applied Nutrition. Under the principles of Public Law 92–313, FDA pays about \$14.6 million a year for this building, even though it was long ago paid for as part of FDA’s contribution to the Public Buildings Fund to enable GSA to construct or lease new facilities.

Question. The justification indicates that “as authorized by the annual Treasury, Postal Service and General Government Appropriations Act, payments under the fiscal year 1996 appropriation were reduced by \$3,957,000; payments for fiscal years 1997 and 1998 are expected to be reduced by an estimated \$4,075,000 and \$4,832,000 respectively.” What is the specific provision of the Treasury, Postal Serv-

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ice and General Government Appropriations Act cited which requires these reductions?

Answer. These reductions referred to the amount paid to GSA from the rental appropriation and retained by the FDA to cover operations, maintenance and repairs of GSA facilities which GSA has delegated to FDA to operate and maintain. The specific provision of the Treasury, Postal Service and General Government Appropriations Act, 1996, that requires these reductions is Public Law 104-52, Section 611. For the record, I would be happy to provide a quote from the section.

[The information follows:]

“Any department or agency to which the Administrator of General Services has delegated the authority to operate and maintain or repair any building or facility pursuant to section 205(d) of the Federal Property and Administrative Services Act of 1949, as amended shall retain that portion of the GSA rental payment available for operation, maintenance or repair of the building or facility as determined by the Administrator, and expend such funds directly for the operation, maintenance or repair of the building or facility. Any funds retained under this section shall remain available until expended for such purpose.”

The amount determined in fiscal year 1996 was \$3,957,000. The funds provided by GSA were used to cover only the recurring services within a normal eight hour day for our delegated buildings which include the Crawford Building in Atlanta, Georgia, and Federal Building 8 at 200 C Street, SW, Washington, D.C., plus four other facilities in the National Capital Area.

For the record let me provide the specific provision from fiscal year 1997 which is in accordance with the Omnibus Appropriations Act, 1997, Public Law 104-208, section 611.

[The information follows:]

“For fiscal year ending September 30, 1997, and thereafter, any department or agency to which the Administrator of General Services has delegated authority to operate, maintain or repair any building or facility pursuant to section 205(d) or the Federal Property and Administrative Services Act of 1949, as amended, shall retain that portion of the GSA rental payment available for operation, maintenance or repair of the building or facility as determined by the Administrator, and expend such funds directly for the operation, maintenance or repair of the building or facility. Any funds retained under this section shall remain available until expended for such purpose.”

To date the total estimated amount for fiscal year 1997 is revised to \$4,561,834, which includes the buildings previously discussed and an estimated amount of \$956,924 for MODULE II which is being added to FDA's inventory of delegated facilities in fiscal year 1997.

Question. How is a fiscal year 1998 reduction required by this Act?

Answer. For the record, let me provide a citation from the Act.

[The information follows:]

The Omnibus Appropriations Act, 1997, Public Law 104-208, section 611 states, “For fiscal year ending September 30, 1997, *and thereafter*, any department or agency to which the Administrator of General Services has delegated authority to operate, maintain or repair any building or facility pursuant to section 205(d) or the Federal Property and Administrative Services Act of 1949, as amended, shall retain that portion of the GSA rental payment available for operation, maintenance or repair of the building or facility as determined by the Administrator, and expend such funds directly for the operation, maintenance or repair of the building or facility. Any funds retained under this section shall remain available until expended for such purpose”.

Question. Is the \$4,832,000 fiscal year 1998 reduction included in FDA's fiscal year 1998 “rental of space” request?

Answer. Yes, the \$4,832,000 is included in the \$46,294,000 request as found in the Rental Payments, FDA Appropriation.

Question. The justification indicates that any recurring reimbursable services provided by GSA over and above the normal eight hour day are paid by FDA out of the Salaries and Expenses appropriation. How much was paid out of the Salaries and Expenses appropriation in each of the last five fiscal years for these services provided by GSA? What is the current fiscal year 1997 estimate?

Answer. We will be happy to provide you with a chart which sets out the dollar amounts paid out of FDA's Salaries and Expenses appropriation for recurring reimbursable services provided by GSA over and above the normal eight hour day. Included in the chart is the current fiscal year 1997 estimate of \$7,019,000. The increase from fiscal year 1996 to fiscal year 1997 is primarily due to increased guard services and security system services mandated by the Department of Justice following the Oklahoma City bombing.

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[The information follows:]

GSA Above Standard Reimbursable Services

<i>Fiscal year</i>	
1997	\$7,019,000
1996	6,719,000
1995	6,866,000
1994	4,925,000
1993	3,857,000
1992	3,599,000

Question. The Agriculture Appropriations Act provides that in the event the FDA should require modification of space needs, a share of the “salaries and expenses” appropriation may be transferred to the “rental of space” appropriation or a share of the “rental of space” appropriation may be transferred to the “salaries and expenses” appropriation, but such transfers shall not exceed 5 percent of the funds made available for rental payments to or from FDA’s “rental of space” account. Please indicate what transfers, if any, have been made to or from the rental of space account in each of the last five fiscal years pursuant to this authority, and indicate the amount and purpose of each funds transfer. What transfers have been made in fiscal year 1997 to date, in what amount, and for what purpose?

Answer. The only time GSA requested such a transfer was in fiscal year 1993. FDA requested and was approved a reapportionment from its “salaries and expense” appropriation to the “rental of space” appropriation for \$453,879. The \$453,879 was for FDA’s increase in GSA space of 47,496 square feet in fiscal year 1993 from September 15, 1992 through March 15, 1993. To date, no GSA requests nor FDA transfers have been made for fiscal year 1997.

Question. While the fiscal year 1998 budget identifies the amount requested for rent and related services in the “salaries and expenses” account, it ignores the Committee directive to consolidate these costs into the FDA “Rental of space” account. Why?

Answer. FDA included a separate line item in the budget titled “S&E Rent and Related” in response to the Committee’s concern regarding FDA’s facilities costs.

FDA is concerned that combining these expenses with GSA Rent in a separate appropriation would greatly limit FDA’s flexibility in meeting its obligations for building-related expenses that cannot always be predicted precisely during the budget process. Only about \$6.5 million of the “Rent and Related” line item is for rent for commercially-leased buildings—the rest is for building-related costs such as additional utilities for laboratory facilities, and additional guard services, where FDA’s needs may vary from time to time. Another complicating factor is that the timing of facility moves cannot be controlled precisely. There are often delays in occupying new facilities, which may cause FDA to incur greater costs than anticipated for the facility to be vacated. If all of these costs were in a separate appropriation, FDA would have to seek an appropriation transfer when such variations occurred, rather than having the ability to absorb them within the Salaries and Expenses Appropriation.

MEDICAL DEVICE APPROVALS

Question. Dr. Friedman, you indicate in your prepared statement the Center for Devices and Radiological Health (CDRH) and the agency are focusing now on innovative ways of bringing down the premarket approval reviews (PMA) review times, but this depends on the level of resources available to do the work. What ways are you exploring to bring time PMA review times?

Answer. FDA is examining and implementing various ways that will help reduce PMA review times. I would be happy to provide, for the record, information describing our activities in this area.

[The information follows:]

PMA’s

Expedited Review: FDA believes it is in the interest of the public health to review PMA’s and 510(k)’s for certain medical devices in an expedited manner. Initially established in October 1989 and expanded in May 1994, expedited review is generally available when a device offers a potential for clinically meaningful benefit as compared to the existing alternatives (preventative, diagnostic, or therapeutic) or when the new medical device promises to provide a revolutionary advance (not incremental advantage) over currently available alternative modalities.

Project Management: Formal scheduling of PMA events such as filing and panel meetings when the application is received.

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Label and Interactive Review: Meetings face-to-face to quickly resolve labeling and other PMA issues.

Electronic Submissions: Allow for alternate ways of submitting and reviewing applications.

Internet: Provide greater access to FDA resource materials and reports which decreases reviewer time used to support Freedom of Information Act (FOIA) requests from the public.

Reengineering: FDA is establishing a PMA reengineering team to review all aspects of the PMA review process and implement needed improvements and enhancements.

Product Development Protocol (PDP): Through reengineering, FDA's CDRH is also seeking to shift certain PMA's into the Product Development Protocol (PDP) review model. Although this provision has been in the statute since 1976, PDP has not been used effectively. FDA is currently reengineering the PDP program. This new approach will incorporate PMA, IDE, and post-market requirements and will be designed to include a variety of tools to facilitate review and approval: a criteria-based segmented review; built-in procedures for product change; resources focused on safety and effectiveness issues; and panel review at the protocol phase only. This reengineering effort should allow "real-time" reviews during the product development protocol process and should eliminate obstacles that prevented effective use of the PDP approach in the past.

Reclassification: Reclassify, as appropriate, preamendments class III devices to class I or II.

Preamendment PMA's: When PMA's will be required, the Agency is working interactively, with preamendment class III submitters prior to the 515(b) call for the PMA's to discuss the studies and data that will be required for the PMA's.

PMA Supplements

"Real-Time" PMA Supplement Review Program: The purpose of this program is to conduct document reviews for certain PMA supplements in "Real-Time", with a face-to-face meeting, video conference, or telephone conference format and provide a decision letter to the company within five days after the meeting.

GMP Pilot: A new method of handling certain PMA supplements for manufacturing and sterilization site changes that speeds up agency review.

Triage: A new look at prioritizing the workload.

Question. What level of resources is included in the agency's fiscal year 1998 appropriations request to be able to do this work?

Answer. FDA is requesting the addition of \$5,207,000 to the Medical Devices budget to improve the quality and timeliness of its review process for Class III applications, PMA's, and PMA supplements. FDA expects a 15 percent increase in PMA workload from fiscal year 1997 to fiscal year 1998 due to requests for reclassifications and submissions of required preamendment PMA's for class III devices. While FDA has made great strides in reducing its review times and backlogs for medical device applications, continued improvement is needed to meet mandated goals with the increased workload. Additional resources will allow FDA to allocate more resources toward the PMA process and to limit the increase in pending PMA's without jeopardizing the recent performance gains made in the 510(k) program.

FDA knows that resources will continue to be scarce, and is beginning to re-engineer the medical device program to obtain maximum public health impact from the resources that will be available. The goal behind this effort will be to focus resources on high-risk, high-impact products while at the same time de-emphasizing areas that pose lower risk to the public, or where FDA involvement is not essential. The improvements and changes that arise from the re-engineering process will ensure that the medical device program is as effective and efficient as possible, and may increase productivity in the future.

We are providing a table that shows FDA's fiscal year 1998 performance goals for PMA workload at Base Resource levels and with additional resources.

[The information follows:]

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ESTIMATED FISCAL YEAR 1998 PERFORMANCE GOALS FOR FDA

	Performance goals—	
	Base level re-sources (per-cent)	With \$5.2 mil-lion additional re-sources (per-cent)
PMA originals:		
Complete first actions on Standard PMA's within 180 days	35	50
Complete expedited first actions within 180 days	85	90
PMA supplements:		
Complete first actions within 180 days	55	80
Complete expedited first actions within 180 days	85	90

Question. Please provide an update on the third party pilot program for Class I and Class II devices. How many 510(k) products are eligible to be reviewed under the pilot program? What kind of products are these?

Answer. FDA's pilot program for third-party review of pre-market notifications, or 510(k)'s, for selected low and moderate risk devices was announced in the Federal Register on April 3, 1996 and began August 1, 1996. FDA has identified 251 types of devices for inclusion in the pilot. This consists of all Class I devices that are not exempt from 510(k)—a total of 221 device types—plus 30 Class II devices. Historically, FDA has received up to 1,500 510(k)'s per year for these 251 device types. All of the Class I devices and 6 of the Class II devices were immediately eligible for third-party review upon commencement of the pilot. Eight additional Class II devices were phased into the pilot in November 1996. The remaining 16 Class II devices will be eligible for review before the end of the first year of the pilot as FDA completes guidance documents for these devices.

Class I devices generally present low risk and their safety and effectiveness can be assured through general controls, such as good manufacturing practices requirements and pre-market notification. More than 70 percent of the 221 Class I devices that are eligible for third-party review are in vitro diagnostic devices—such as, for example, cholesterol test systems. Review of such devices focuses on the accuracy and precision of the test. Class II devices generally present moderate risk and require special controls—such as guidance documents or post-market surveillance—in addition to general controls. The 30 Class II devices that are in the pilot include a broad variety of devices, such as dental alloys, syringes, blood pressure measurement devices, and diagnostic ultrasound systems.

Question. What are your average review times for these products?

Answer. To date, FDA has issued substantial equivalence decisions for five 510(k)'s that were reviewed by third parties under the pilot program. I would be happy to provide a table showing review times for these submissions.

[The information follows:]

510(K) REVIEWS UNDER THE PILOT PROGRAM

Type of device	Class	Total elapsed time ¹	Cumulative review time (days) ²		
			3rd party ³	FDA	Combined
Low density lipo-protein reagent	I	51	8	16	24
Low density lipo-protein reagent	I	51	8	16	24
Operating table (electrohydraulic)	I	126	12	9	21
Transcutaneous electrical nerve stimulator (TENS)	II	103	40	8	48
hCG test strip	II	22	8	2	10

¹Total days from third party's receipt to FDA's final action.

²Includes third party and FDA review time only, i.e., excludes days when both FDA and third party review were suspended pending receipt of additional information from the submitter and days between mailing and receipt of correspondence.

³Based on preliminary information reported by the third party.

During the first seven months of the pilot program, from August 1996 through February 1997, FDA received more than 600 510(k)'s for third party-eligible devices which were not submitted to third parties. During this period, FDA's final actions

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on 510(k)'s for these types of devices were taken in an average of 79 cumulative FDA review days, with an average total elapsed time from FDA's receipt to final action of 113 days, including time "on hold" awaiting additional information from the submitter.

Question. Are you planning to add more eligible products to this program?

Answer. Yes. Based on public comments FDA has received about the pilot, we intend to make substantially more Class II devices eligible for third-party review. We are currently preparing a list of at least 60 additional Class II devices for the pilot.

Question. How long will this take?

Answer. We expect to announce the list of additional Class II devices by early June 1997. These devices will be made eligible for third-party review as we complete guidance documents for these devices, which we intend to do as rapidly as possible. We expect that at least 20 of the additional devices will be eligible for third-party review by the end of fiscal year 1997, bringing the total number of eligible Class II devices at that time to approximately 50. The remaining 40 additional Class II devices will be phased-in as soon thereafter as possible.

Question. What are your success measures for this pilot, and when were they established?

Answer. FDA's April 3, 1996 Federal Register notice stated that the purpose of the pilot is to test the feasibility of using third-party reviews to improve the efficiency of the agency's review of 510(k)'s for low and moderate risk devices. The notice further specified that this includes determining a number of factors which I will provide for the record.

[The information follows:]

- the willingness of qualified third parties to participate;
- the willingness of device manufacturers to participate;
- the quality of third-party reviews, including the extent to which third parties are free of conflicts of interest;
- the impact upon FDA workload, decisions, and 510(k) processing times; and
- the impact on the total time necessary for manufacturers to obtain marketing clearance decisions.

The notice elaborated that if the piloted approach is successful, it will provide manufacturers with an alternate, potentially more rapid means of obtaining pre-market reviews and enable FDA to target its scientific review resources at higher risk devices while maintaining confidence in the review by third parties of low and moderate risk devices.

Question. How many applications have been reviewed under this program so far?

Answer. As of May 1, 1997, FDA has received eight 510(k)'s under the pilot program, although additional 510(k)'s may currently be under review by the recognized third parties. FDA has issued substantial equivalence decisions for five of the eight submissions, and has requested additional information from the third parties for the remaining three submissions.

Question. Is this sufficient to gauge the success of the program?

Answer. No. The number of submissions indicates that most manufacturers of the eligible devices have elected not to participate in the pilot. Therefore, the pilot has not provided a sufficient basis to assess the quality or timeliness of third-party reviews.

Question. Why do you think more manufacturers are not taking advantage of this program? Is it because you are doing a better job of reviewing 510(k) applications and there is no incentive for manufacturers to try this path to market?

Answer. FDA's success in eliminating the backlog of overdue 510(k) reviews certainly limits manufacturers' incentive to try a different approach. Based on industry comments, this is most true for Class I devices, which generally have lower FDA review times than other device types. Industry comments have suggested adding more Class II devices to the pilot to encourage increased participation, and FDA is currently working to do so. Other factors which may contribute to manufacturers' lack of participation include: manufacturers are accustomed to interacting with FDA; manufacturers are uncertain about the costs and benefits of the third party approach; third parties assess manufacturers a fee-for-service whereas FDA does not charge for 510(k) reviews; and manufacturers do not know whether FDA will accept the results of a third party's review, given that by law FDA must issue substantial equivalence orders.

Question. What have you done to encourage participation from device manufacturers?

Answer. Before initiating the pilot program, FDA solicited public comments on the proposed approach for the pilot through a June 1995 Federal Register notice and a public workshop. FDA attempted to address the resulting comments in its final plans for the pilot. For example, FDA significantly expanded the number of eligible

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devices beyond what was originally proposed, and established a 30-day performance goal for its issuance of final decisions based on third-party reviews. After announcing the pilot in the Federal Register, FDA promoted the pilot through a July 1996 mass-mailing to approximately 13,000 registered device firms. FDA also assisted the recognized third parties in promoting the pilot by providing them with non-proprietary mailing list information for device firms that have registered and listed with FDA for the device types that are included in the pilot. FDA has also provided frequent information about the pilot to the trade press and at numerous professional and trade association meetings.

Question. Does this program offer a cost benefit to the Agency?

Answer. At the current level of participation, any efficiencies which may be provided by third-party review are outweighed by the start-up and operating costs of the program. Given that the start-up costs of a pilot program such as this are relatively high, however, FDA had anticipated that third-party reviews may not yield a cost benefit to the agency during the pilot phase. We believe it is premature to draw any final conclusions about the pilot given that participation may increase as additional devices become eligible for third-party review and as manufacturers obtain more information about the outcomes of third-party reviews. FDA intends to complete an evaluation of the pilot before the end of its planned 2-year duration.

Question. The "Report on Medical Device Review Performance 2nd and 3rd quarters fiscal year 1996" submitted to the Appropriations Committee indicates that some of the offices within the Office of Device Evaluation are piloting the use of electronic transmission of applications to help ease the burden of the current paper-intensive submission process. The document states that electronic access will also provide significant savings on the storage and retrieval of applications for both industry and the agency. How many sponsors of applications have taken advantage of this system?

Answer. Through the first half of fiscal year 1997, there were 34 applications submitted electronically, by seven different sponsors. These applications included 510(k)'s, PMA's, PMA Supplements, IDE's, and IDE supplements.

Question. Could you give me some idea of what you mean by "significant savings"? Do you have any information on full-time equivalent's (FTE's) or FTE staff hours that are saved by the utilization of electronic submissions?

Answer. Significant savings will be realized when the majority of medical device applications arrive in electronic form. We will then be able to eliminate our costly process of scanning paper to make document images available to reviewers. That contract effort costs FDA about \$1,000,000 per year of which 75 percent goes toward the scanning of pre-market applications. In addition, savings are foreseen in the preparation of the reviewers notes, the resolution of questions asked of the sponsor and the final review document. We do not yet have sufficient statistics to project actual savings. However, based on our limited sample, an overall savings of one week in total elapsed time of the application review process for each pre-market application is a reasonable projection. The quality of the review will also be improved by having access to more information in a shorter time period.

Question. How do review times for "paper less" applications compare to the current method?

Answer. Reduced review times are difficult to estimate based on our small sample of experience with electronic submissions. Anecdotal experiences have shown a reduction of reviewer time of several hours for a single electronic search which otherwise would have to have been accomplished manually. One company has estimated that they experienced a savings of 20 percent in the time required to prepare a submission to the Agency. It is anticipated that additional savings in review time will be gained from the use of electronic conferencing between reviewer and sponsor.

Question. What is your projection on when FDA will have moved into a "thoroughly paper less program"?

Answer. FDA's Center for Devices and Radiological Health could be prepared for all applications to be submitted electronically within the next twelve months. It will then be up to the medical device industry to take advantage of the technologies available. This could happen to a significant extent in the next two to three years.

Question. What is the estimated cost of moving to a "paper less" system?

Answer. Beyond what has already been invested in our moving towards a "paper less" system, another \$1,000,000 will be used to complete the upgrades of desktop equipment, storage devices, and software, and to provide training, and personal video conferencing and group video conferencing capabilities for all reviewers. Another \$500,000 per year will be utilized to maintain pace with the technology.

Question. Can all FDA's systems "talk" or link up with one another—for example, those systems that you use to track reports? For example, is the MAUDE system

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designed to process the MEDWATCH forms compatible with all FDA's other reporting systems? Is there any duplication in FDA's reporting systems?

Answer. The Agency is now implementing a common Information Systems Architecture, or ISA, which will provide a consistent technology infrastructure across the FDA to ensure that systems developed throughout the Agency will be compatible with each other. Legacy systems are being evaluated to determine if they should be modified to conform to the new ISA standards. Initiatives are underway to guide the submittal and dissemination of information to and from the Agency via Internet and other communication mechanisms to assure compatibility across the FDA. One such example is the development of an Agency "Gateway" designed to provide a single receipt point for the electronic submission of adverse event reports from industry.

Recently developed FDA reporting systems were designed for compatibility where appropriate and are not duplicative. These systems were designed to support specific legislative mandates and regulatory processes which differ from one FDA Center to another and even from program to program within a Center. For example, MAUDE was designed to fully integrate with other medical device databases and was designed for data element compatibility with other Agency systems collecting MedWatch data. However, the design of MAUDE also had to support unique requirements for reporting medical device adverse events, from the Safe Medical Devices Act of 1990, including specific data elements, reporting time frames, and report flows which differ significantly from other Centers' MedWatch reporting requirements.

Question. What does the FDA fiscal year 1998 salaries and expenses appropriations request mean in real terms for the device industry? What can be expected in terms of review times for 510(k)'s and PMA's?

Answer. FDA is requesting a total program level of \$166,072,000 which includes a \$5.2 million proposed increase for user fees for medical device review of PMA applications and PMA supplements and 1,623 FTE for the Medical Device program. Without this increase, the total base level for the program would be \$160,872,000. Medical device review is the Center for Devices and Radiological Health's, or CDRH's, highest resource priority and the number of FTE spent on device review has been steadily increasing between fiscal year 1993 and fiscal year 1996. FDA has undertaken several management initiatives to reinvent its medical device program in an effort to minimize industry workload and better use its own resources. I would be happy to provide a list for the record.

[The information follows:]

Exempting nearly three-fourths of all Class I device categories from the 510(k) pre-market clearance requirement;

Undertaking a pilot program to test third-party review of low and moderate risk-medical devices by outside organizations;

Conducting a project management initiative for PMA's in two device review divisions;

Developing a "real time" review pilot for some types of PMA supplements where the supplement will be reviewed by FDA during a meeting or tele-conference with the industry;

Initiating a one-year pilot project to test a new way to handle PMA supplements pertaining to changes in product manufacturing and/or sterilization sites; and

Implementing new strategies to aid in IDE development and review.

FDA will also continue its efforts to streamline and support a more stable and predictable review process. FDA expects a 15 percent increase in PMA workload from fiscal year 1997 to fiscal year 1998 due to requests for reclassifications and submissions or required preamendments PMA's. In addition, efforts will be made to limit the increase in the number of pending PMA's in fiscal years 1997 and 1998.

The following chart shows projected fiscal year 1998 product performance at Base Resource levels:

Fiscal year 1998 performance	510(k)	PMA
Pending from fiscal year 1997	1,929	86
Received in fiscal year 1998 (est.)	4,800	70
Completed in fiscal year 1998 (est.)	5,000	55
Pending from fiscal year 1998 (est.)	1,729	101
Reduction in percent pending fiscal years 1997-98	- 10	+ 17

Question. Will FDA be able to keep up with its current performance goals for 510(k)'s and PMA's with the resources requested for fiscal year 1998?

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Answer. FDA will not be able to maintain current performance goals for 510(k)'s and PMA's with base level resources requested for fiscal year 1998. FDA is requesting the addition of \$5,207,000 to the Medical Devices budget to improve the quality and timeliness of its review process for Class III pre-market approval applications, or PMA's, and PMA supplements. Since PMA devices by definition are essentially "new" and medically important products, they represent the highest potential risk to patients. Given this, our goal is to focus our resources on high-risk, high-impact products, or work areas to maximize public health impact. In addition, FDA expects a 15 percent increase in PMA workload from fiscal year 1997 to fiscal year 1998 due to requests for reclassifications and submissions of required preamendment PMA's.

While FDA has made great strides in reducing its review times and backlogs for medical device applications, continued improvement is needed to meet mandated goals. Additional resources will allow FDA to allocate more resources toward the PMA process and to limit the increase in pending PMA's without jeopardizing the recent performance gains made in the 510(k) program.

FDA knows that resources will continue to be scarce, and is beginning to re-engineer the medical device program to obtain maximum public health impact from the resources that will be available. The goal behind this effort will be to focus resources on high-risk, high-impact products while at the same time de-emphasizing areas that pose lower risk to the public, or where FDA involvement is not essential. The improvements and changes that arise from the re-engineering process will ensure that the medical device program is as effective and efficient as possible, and may increase productivity in the future.

We are providing a table that shows FDA's fiscal year 1998 performance goals for PMA workload at base resource levels and with additional resources.

[The information follows:]

ESTIMATED FISCAL YEAR 1998 PERFORMANCE GOALS FOR FDA

	Performance goals—	
	Base level resources (percent)	\$5.2 million additional resources (percent)
PMA originals:		
Complete first actions on Standard PMA's originals within 180 days	35	50
Complete expedited first actions within 180 days	85	90
PMA supplements:		
Complete first actions on standard PMA supplements within 180 days	35	80
Complete expedited first actions within 180 days	85	90

FDA is committed to achieving the following review times at base level resources:

FISCAL YEAR 1998 PERFORMANCE GOALS WITH BASE RESOURCES—INCREASED PMA WORKLOAD

510(k)'s	PMA's
Complete 80 percent first actions within 90 FDA days, compared to 94 percent in fiscal year 1996.	Complete 35 percent of first actions on standard PMA originals within 180 days, compared with 53 percent in fiscal year 1996.
Complete 40 percent final actions within 90 FDA days. FDA completed 59 percent for the first nine months of fiscal year 1996.	Complete 55 percent of first actions on standard PMA supplements within 180 days, compared with 77 percent in fiscal year 1996.
	Complete 85 percent of expedited first actions within 180 days. (FDA completed three out of four expedited applications filed in fiscal year 1996 that have been under review at least 180 days).

Question. In the 2nd and 3rd Quarter Fiscal year 1996 Performance Reports submitted to this Committee, FDA reported that CDRH utilized approximately 565 FTE in premarket review activities. The fiscal year 1998 budget justification indicates

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that out of more than 1,600 FTE designated for the medical and radiological devices program, approximately 643 FTE will be utilized on premarket review activities. What is meant by "premarket review activities"? Does this include more than simply reviewing applications?

Answer. Yes, premarket review activities include more than simply reviewing applications. Premarket review activities are conducted by CDRH and the Office of Regulatory Affairs, or ORA. For the record, I would be happy to provide a list of activities included under pre-market review activities.

[The information follows:]

- 510(k)'s (including Supplements)
- IDE's (including Amendments)
- IDE Supplements
- PMA's (includes Amendments)
- PMA Supplements
- Petitions
- Bioresearch Monitoring
- Regulation/Policy Development
- Pre-market Manufacturers' Assistance
- Pre-market Liaison/Support Activities

Pre-market Activities for ORA include:

- Preapproval Inspections
- Data Integrity Audits
- "For Cause" Investigations

For fiscal year 1996, time reporting data shows FDA's CDRH used 565 FTE's in pre-market activities out of a program total of 643 FTE's. FDA employs time reporting surveys to estimate actual resource use during the year and to guide future formulation of resource requirements.

Question. Are all of the 643 FTE's devoted solely to premarket review functions?

Answer. Yes, the 643 FTE represent total estimated FDA pre-market resources for the Medical Device program for fiscal year 1998. The fiscal year 1998 FDA distribution of resources for CDRH is 577 FTE and for ORA is 66 FTE.

Question. Provide a breakdown of how these 643 FTE's are assigned, i.e., how many work on: 510(k)'s, PMA's, PMA supplements, IDE's, and IDE supplements.

Answer. The 643 FDA FTE's are assigned to CDRH and ORA. I would be happy to provide the breakdown of how the 577 CDRH FTE are projected to be used for pre-market evaluation activities in fiscal year 1998.

[The information follows:]

<i>Pre-market Evaluation Activity</i>	<i>FTE</i>
510(k)'s (including Supplements)	196
IDE's (including Amendments)	52
IDE Supplements	35
PMA's (includes Amendments)	150
PMA Supplements	52
Petitions	7
Bioresearch Monitoring	23
Regulation/Policy Development	17
Pre-market Manufacturers' Assistance	22
Pre-market Liaison/Support Activities	23
Total, CDRH FTE	577

The breakdown of pre-market activities for the Office of Regulatory Affairs include:

<i>Pre-market Evaluation Activity</i>	<i>FTE</i>
Preapproval Inspections	63
Followup to Preapproval Inspections	3
Total, ORA FTE	66

Question. In the quarterly reports to this Committee, the FDA stated that in order to help PMA review, it has shifted FTE's to PMA review during the year. Where did these FTE's come from?

Answer. The FTE that were shifted to PMA review during fiscal year 1996 came from the science base area. For fiscal year 1997 to 1998, we plan to significantly increase the effort devoted to PMA reviews. This will be done by transferring people from other work areas, primarily the review of lower-risk devices under 510(k)'s. The additional staff assigned to work on PMA's will be used to bolster the present work on reviewing new and medically important PMA's as well as reviewing

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preamendment PMA's and/or preparing reclassification actions. The result should be timelier reviews while maintaining appropriate scientific rigor.

Question. In the first quarterly report, FDA stated specifically: "In addition, exempting more of the easiest-to-review Tier One 510(k)'s and shifting resources from 510(k)'s to PMA reviews may increase 510(k) review times for the remaining 510(k) applications. However, the 2nd and 3rd Quarterly reports indicate that FDA has "been able to continue improving 510(k) performance." How have you done this?

Answer. We were able to continue improving 510(k) performance in fiscal year 1996 because we increased the FTE in the 510(k) area and the PMA area while reducing resources from the science base area.

Question. How many resources have you shifted from 510(k)'s to PMA's?

Answer. We are projecting a shift of up to 15 FTE from the 510(k) area to the PMA area in fiscal year 1997 and possibly an additional 15 FTE will be shifted in fiscal year 1998. Sufficient FTE, however, will be retained for adequate review of complex 510(k)'s. We want to continue to improve the timely review of higher impact and medically important devices. To accomplish this, FDA's CDRH is in the process of re-engineering the pre-market work processes to make them as efficient and effective as possible. The re-engineering effort involves a risk-based approach to increase the direct attention paid to reviewing those medical devices that present an important clinical benefit or significant risk to patients. FDA will also identify simplified, alternative methods for reviewing routine, lower risk products in ways that continue to provide adequate consumer protection, and also continue reviewing devices that can be exempted from the 510(k) process.

Question. Did FDA ever shift PMA resources to 510(k)'s in order to reduce the backlog and review times? If so, what impact did this have on the PMA review process?

Answer. FDA did not shift PMA resources to reduce the 510(k) backlog. We temporarily shifted some FTE from outside the program area to assist in decreasing the backlog. Approximately 18 FTE from the Office of Science and Technology, or OST, within FDA's, CDRH, were used to conduct direct review of pre-market submissions. In fiscal years 1994 and 1995, CDRH also received a substantial amount of new resources for medical device review and most of the new staff were assigned to work on 510(k)'s. The additional review staff, coupled with several management initiatives for the 510(k) process, enabled FDA to substantially reduce the backlog of overdue and pending applications.

Question. The reports, along with the fiscal year 1998 budget justification, indicate that a 33 percent increase in PMA workload is expected from fiscal year 1996 to 1997, and another 15 percent increase is projected in fiscal year 1998. Do you plan to continue to shift resources from 510(k) reviews and, if so, how do you plan to continue to maintain or improve 510(k) review times?

Answer. In fiscal year 1997, we project shifting up to 15 FTE from review of lower-risk devices under 510(k)'s to the PMA area. In fiscal year 1998, an additional 15 FTE possibly will be shifted to the PMA area.

The 510(k) devices encompass a broad variety of devices whose risk potential varies widely. We plan to focus our resources on the 510(k)'s with the greatest technological complexity and uncertainty as to safety and effectiveness. Because of the potential public health impact for these types of devices, we plan to increase the personnel assigned to reviewing them. Again, these people will be reassigned from the review of lower risk 510(k)'s. We will identify alternative mechanisms for providing adequate public health protection for the lower risk 510(k)'s by redirecting or reducing FDA's direct involvement. In fact, by fiscal year 1999, we anticipate developing alternative regulatory mechanisms for 33 percent more lower risk devices. Further, improving upon the current high level of 510(k) review time would be difficult because the remaining 510(k)'s will be the more complex applications involving more scientific issues and data.

OFFICE OF REGULATORY AFFAIRS

Question. Dr. Friedman, you indicate in your testimony that the Office of Regulatory Affairs began implementing a new automated system—called Operational and Administrative System for Import Support (OASIS)—that greatly speeds up FDA's handling and clearance of imported products. How is this new paperless processing system helping the agency to maintain its surveillance of the rapidly mounting number of imports of FDA-regulated products?

Answer. The OASIS computerized electronic entry review system is the cornerstone of FDA's strategy which aims to be responsive to the need of the importer/broker for speedy access to domestic commerce while maintaining adequate watch on imported goods.

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OASIS greatly speeds up FDA's handling and clearance of imported products, and operates in a largely paperless environment. Data FDA needs to make its admissibility determinations are transmitted electronically, and FDA's decisions are communicated electronically back to the brokers.

With OASIS, the initial FDA admissibility determination on every shipment is provided to the broker within eight minutes after the broker submits the entry data. Eighty percent of all shipments get their final FDA clearance within those eight minutes, and over 85 percent are given clearance within three hours, all completely without paper.

The nationwide roll out of OASIS, FDA's new automated system for processing shipments of foreign-origin products seeking to enter the U.S., is underway. On December 2, 1996, OASIS was implemented at FDA's Seattle, Philadelphia, Baltimore, and New Orleans districts. On January 23, 1997, OASIS was implemented at FDA's Atlanta and San Juan districts, and at San Francisco and Kansas City districts on February 19. The rest of the OASIS roll out will be to Detroit and Minneapolis districts in March; Florida and Nashville in April; Dallas and Denver in May; Cincinnati and Chicago in June; New York in July; and Los Angeles, Buffalo and New England districts in September. By the end of September, 1997, OASIS will be operational at every FDA district, covering every U.S. port of entry where FDA-regulated products come in by sea, land, and air.

OASIS will enhance FDA's ability to identify problem shipments by improving our capability to target products with a history of non-compliance and those products which constitute a high risk for a potential public health hazard. Further, it will help assure that problem products and manufacturers are recognized as such in whatever port they are entered, thereby limiting the problem of "port shopping."

OASIS operates in conjunction with the U.S. Customs Service's Automated Commercial System, or ACS. A line is a unique item on an import entry differentiated by country of origin, manufacturer, container size, or product. For lines regulated by FDA, the filers send information required by both Customs and FDA when offering the shipment for entry. For electronically filed entries, ACS assembles a set of data for FDA by combining Customs and FDA data. The lines are then electronically screened against a set of criteria developed and maintained by FDA using OASIS.

The screening determines if the lines match any of the established criteria based on product, manufacturer, shipper, country of origin, or any combinations of these four screening elements. The results of the screening are summarized at the entry level and passed as an electronic message back to the filer.

The purpose of this initial electronic screening is to forward to FDA for further review those products with which, based on the product itself, the country of origin, manufacturer or shipper, FDA may have further regulatory interest and to do this on a uniform nationwide basis. The screening criteria take into account such factors as FDA's previous experience with the product, for example a high compliance rate or low compliance rate, planned surveillance work in various program areas, emerging problems or trends, and the capacity of FDA field staff to collect and examine imported product. FDA is capable of changing the electronic screening criteria in OASIS within minutes as the need arises to respond to emerging problems.

For those products that are flagged as "FDA Review" during the initial electronic screening, the entry data is loaded into a different database and screened again using more sophisticated criteria. It is then made available for review by the initial OASIS user, the FDA entry reviewer. At this time, OASIS enables the entry reviewer to request possible actions and OASIS presents all applicable guidance, such as Import Alerts, Surveillance Programs, and Assignments, which may apply to the line to assure that all available information is evaluated when an entry decision is made. Based on this additional review, the FDA entry reviewer will make a decision to detain, sample, or release the entry. Once all lines of an entry have been processed, a decision message for each line is electronically sent to the filer. Further, for the first time, OASIS enables FDA to maintain a readily accessible database of FDA regulated products that have entered the U.S. This capability of accessing information on previous shipments of products, who shipped them and who received them, has proven to be a very valuable tool in responding to possible health hazards associated with imported products. We are now able, in a very short time, to identify who may have received products of concern and plan appropriate follow-up.

Question. What level of funding is being provided for fiscal year 1997 for the implementation of OASIS? What level of funding is included in the fiscal year 1998 appropriations request for this system?

Answer. Development and maintenance of OASIS will require approximately \$1,500,000 in fiscal year 1997. The estimate for fiscal year 1998 is \$1,650,000.

Question. Will additional investments in OASIS be required in future fiscal years? If yes, please identify the level of funding required by fiscal year.

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Answer. It will cost approximately \$500,000 per year to maintain the OASIS system in the outyears.

BLOOD SUPPLY AND BLOOD PRODUCT SAFETY

Question. What are FDA's current procedures in dealing with adverse incidents in blood products when they occur?

Answer. Under 21 CFR 600.80, licensed manufacturers of biological products, including blood derivatives, are required to report adverse experience information to FDA. Manufacturers are required to report serious and unexpected adverse experiences within 15 working days of initial receipt of the information. They are required to report other adverse experiences at periodic intervals. FDA has required that plasma derivative manufacturers file monthly reports on adverse reactions, including reports of potential transmission of infectious diseases, associated with their products to assure that incidents involving potential transmission of infectious agents are investigated expeditiously. In addition, manufacturers are required to investigate reports of adverse experiences. Whole blood and blood component manufacturers are not subject to the adverse experience reporting requirements in 21 CFR 600.80, but they are required to investigate such reports under 21 CFR 606.170(a). Blood and blood component manufacturers are required to report deaths under 21 CFR 606.170(b).

The FDA may receive reports of incidents of Adverse Experience Reports, or AER's, from a number of different sources. The Centers for Disease Control and Prevention, or CDC, reports directly to FDA any adverse events associated with blood products that it receives. These reports generally come from the FDA's MedWatch system, manufacturers, or consumers. The Agency has evaluated its procedures for processing these AER's and implemented additional steps to have AER's relating to biological products provided directly to FDA's Center for Biologics Evaluation and Research, or CBER, in an expedited manner. FDA is currently developing a proposed rule to require unlicensed establishments to report errors and accidents to the Agency. This rule will provide FDA with a more accurate surveillance of the nation's blood supply and facilitate a rapid response where public health may be at risk. This is under review in the Agency and will be forwarded to OMB in the next few months.

CBER also has a Standard Operating Procedure, or SOP, for emergency operations. This document provides guidance to CBER staff on the procedures to be used in situations that might constitute a threat to the public health. The SOP designates contacts in CBER's review offices, Office of Blood Research and Review, Office of Vaccine Research and Review, and Office of Therapeutics Research and Review, and compliance components. These individuals are the focal points for evaluating and ensuring rapid responses to significant and serious reports of AER's that present public health concerns and may represent emergency situations. These officers, in consultation with other appropriate experts, such as the Office of Regulatory Affairs, evaluate the information provided in the AER, determine if more information is needed to fully assess the impact of the incident, and initiate a response to the incident based on the threat or potential threat to the public health.

AER's from plasma derivative manufacturers which are determined to be a public health threat, result in expedited actions which include, but are not limited to, initiating establishment inspections to conduct a complete assessment of manufacturing practices, determine the manner in which a manufacturer responds to AER's pursuant to Good Manufacturing Practices, or GMP's, and reporting requirements, and evaluating proposed corrective actions and planned responses and public notifications by the manufacturer.

Question. How does the FDA coordinate with and respond to CDC when CDC reports a transmission of infectious disease related to the blood supply or blood products?

Answer. The FDA has extensive interactions at all levels with its sister Public Health Service agencies, CDC and NIH, on blood safety issues.

In October 1995, Secretary Shalala accepted the recommendations of a Department task force reviewing the July 1995 Institute of Medicine, or IOM, report on HIV and the blood supply. In response to these recommendations, the Secretary raised blood safety to the highest levels of Department concern. The Assistant Secretary for Health was designated to be the Blood Safety Director, with overall responsibility for coordination and oversight of the Public Health Service's blood safety programs.

Working with the Blood Safety Director is the Blood Safety Committee which includes the Director, NIH; the Director, CDC; the Administrator, Health Care Financing Administration; and the Commissioner of Food and Drugs. The Blood Safe-

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ty Committee has been meeting periodically since January 1996. The PHS Advisory Committee on Blood Safety and Availability further supports this effort. This Advisory Committee includes representatives of industry, consumers, scientific experts and ethicists. Its purpose is to provide a forum to examine broad public health and societal implications of blood safety issues.

Since its inception in 1996, the Blood Safety Committee has been informed of adverse events or emergency situations whenever they are likely to have broad public health impact or require increased coordination between the public health agencies.

The CDC has created a position of Assistant Director for Blood Safety in the Division of Viral and Rickettsial Diseases, to facilitate interactions with FDA on blood issues. FDA also receives input from CDC and NIH on issues of blood safety through other mechanisms. CDC and NIH representatives serve as members of the Blood Products Advisory Committee which provides scientific advice to FDA on a variety of issues including product approvals. NIH and CDC representatives also serve on the Transmissible Spongiform Encephalopathies, or TSE, Advisory Committee which advises FDA on TSE issues including their possible impact on blood and blood products. NIH and CDC participate in the interagency Advisory Committee on Blood Safety and Availability which holds monthly teleconferences to discuss issues affecting blood safety. Together, these efforts ensure that CDC and NIH have input at the highest levels of FDA and the Department concerning blood safety.

The CDC has a number of different systems for surveillance of current or potential threats related to the transfusion of blood/blood products. These include disease-specific surveillance systems, donor-based systems for HIV, and recipient-based systems. Identification of previously unknown agents may occur through epidemiological investigations or emerging infection projects. CDC reports directly to FDA any adverse events associated with receipt of blood and blood products that are identified through its surveillance systems or epidemiologic investigations. The CDC routinely provides input to the FDA's Blood Products Advisory Committee, affording the Committee the benefit of this surveillance expertise.

As described previously, the Agency procedures for evaluation and response to AER's includes consultation as necessary with appropriate experts. The expertise needed may require contact with the CDC. The purpose of the contact is to gather additional surveillance data that may be available and to coordinate investigational efforts at user sites where significant adverse events have occurred.

The CDC also participates in product investigations by conducting epidemiological studies or assisting with scientific analysis. Recent examples include Centeon Albuminar in which CDC provided epidemiological assistance in investigating cases of individuals affected by bacterially contaminated product and Alpha Factor VIII and Factor IX in which the CDC provided epidemiological and laboratory assistance in investigating the transmission of Hepatitis A virus from clotting factors. NIH and CDC also share information from large scale surveillance studies on blood safety issues such as the retrovirus epidemiology in donors study, the transfusion transmitted virus study, and the transfusion safety study.

FDA recognizes the sentinel role that CDC plays in safeguarding our nation's blood supply. CDC, in cooperation with FDA, has been conducting surveillance in this country for a rare strain of HIV-1, group O, through the CDC surveillance program. In 1996, the first two cases of HIV group O were reported because of these efforts. FDA has advised manufacturers to improve their test kits to detect these novel strains of HIV and is currently reviewing applications for HIV test kits to detect HIV group O. These issues were discussed at public sessions of FDA's Blood Products Advisory Committee held in September 1996. In cooperation with CDC and NIH, FDA has established a working group to identify and obtain samples from individuals infected with novel HIV strains worldwide. These samples will be used to ensure that HIV tests used in this country can detect novel HIV strains before they reach our country. As a precautionary measure, FDA issued recommendations in December 1996 to defer from donating blood individuals who were in countries identified as endemic for HIV-1 Group.

In 1996, FDA approved tests to detect HIV antigen in blood donors. FDA issued recommendations to blood banks to implement HIV antigen tests when they were licensed. These HIV antigen tests are used in addition to tests to detect antibodies to HIV and serve to further close "the window period" for HIV by providing another level of assurance to prevent HIV transmission through blood and blood products. FDA worked with CDC in developing recommendations for the use of tests such as the HIV p24 antigen test in non-blood bank clinical care settings and these were published in the CDC's "Morbidity and Mortality Weekly Report."

One example of FDA interactions with CDC and NIH involves the potential transmission of Creutzfeldt-Jakob Disease—CJD—through blood products. CJD is a transmissible spongiform encephalopathy possibly caused by a protein called a

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prion. FDA has been involved in national and international efforts focused on better understanding Transmissible Spongiform Encephalopathies, or TSE, including CJD. In this area, FDA has collaborated extensively with NIH and CDC, as well as the United States Department of Agriculture, and affected industries and consumer groups.

FDA has formed an intra-agency working group composed of the FDA Deputy Commissioner for Operations and experts from each FDA Center to consider transmissible spongiform encephalopathies and their impact on FDA regulated products. A special CJD advisory committee was formed in 1995, and was rechartered in June 1996 for two additional years as the TSE Advisory Committee. The TSE Advisory Committee has met periodically to provide advice to FDA, most recently, in April of this year. Issues related to blood safety and CJD have been discussed periodically with these committees.

FDA has also taken other precautionary measures to safeguard the blood supply. In August 1995, FDA issued recommendations for the deferral of blood donors at risk for CJD. FDA issued revised recommendations in December 1996 to clarify familial risk following a discussion of this issue by the TSE Advisory Committee. CDC is conducting surveillance studies to look for CJD in this country in patients who have diseases associated with increased exposure to blood and blood products, such as persons with hemophilia. No association between hemophilia and CJD has been found to date. In addition, FDA, CDC, NIH and industry have been cooperating in scientific studies to assess the risk of transmission of CJD by blood and blood products. These studies are ongoing. The issue of CJD transmission by blood and blood products was discussed at the Advisory Committee on Blood Safety and Availability in April of this year.

Question. What efforts have been taken to move forward in improving rapid patient and physician notification when an adverse incident occurs?

Answer. The FDA is working with industry and consumer groups to identify more efficient and effective consumer notification methods. These notifications range from product alerts and quarantine notices to product recalls. The Agency has detailed guidelines at 21 CFR, Part 7 which outline the responsibilities and expectations of manufacturers in conducting field corrections of marketed products that represent a potential threat to the health of consumers. In addition, FDA can order the recall of biological products that present an imminent or substantial hazard to the public health. Plasma derivative manufacturers are required to file monthly reports on adverse reactions associated with their products to assure that potential transmissions of infectious agents are investigated expeditiously. The FDA has also taken further steps to address the issue, which I would be happy to provide for the record.

[The information follows:]

- The Agency utilizes electronic communications including the CBER World Wide Web Home Page, fax-on-demand, press releases and talk papers, and a Blood and Plasma Products hotline to disseminate information concerning product recalls and market withdrawals.
- FDA has instituted communication of withdrawals and/or recalls of plasma derivatives to consumer groups such as the National Hemophilia Foundation and the Committee of Ten Thousand, as appropriate.
- A PHS meeting, including FDA, CDC, and the National Heart, Lung, and Blood Institute, or NHLBI, was convened in November 1996 to discuss and obtain public input on notification of the public on recalls and ongoing investigations. An interagency working group discussed proposals to track products by lot number to recipient at a March 1997 Blood Products Advisory Committee meeting. The industry representatives were encouraged to develop plans to more effectively notify blood product end-users of recalls and market withdrawals.
- On September 9, 1996, FDA in cooperation with HCFA issued a final rule on, “Current Good Manufacturing Practices for Blood and Blood Components: Notification of Consignees Receiving Blood and Blood Components at Increased Risk for Transmitting HIV Infection.” This rule requires blood establishments to notify consignees of HIV lookback cases so that physicians or other health care workers can be notified and, where appropriate, recipient notification can occur.
- In December 1996, FDA advised plasma derivative manufacturers to modify their labeling of plasma derivatives to include warnings about the potential of these products to transmit infectious diseases.
- The Agency has continued efforts to make the public aware of FDA’s decision-making process on evaluating AER’s, initiating recalls, clarifying present operating procedures and encouraging the use of new technologies for notifying consumers.

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The FDA holds periodic meetings with consumer organizations such as the National Hemophilia Foundation and the Committee of Ten Thousand to discuss these issues.

FISCAL YEAR 1997 REPROGRAMMING NOTIFICATION

Question. On April 10, 1997, I received a letter from Secretary Shalala notifying me of the agency's plan to reallocate funds identified in the fiscal year 1997 Committee Report and adopted by the Conference committee. While the letter identifies four specific changes in accordance with the established reprogramming thresholds, it does not adequately identify where these funds are being shifted to or taken from and for what reasons. Included is a copy of the April 10, 1997, letter and the backup summary table the agency provided to the Committee.

[The information follows:]

LETTER FROM DONNA E. SHALALA

SECRETARY OF HEALTH AND HUMAN SERVICES,
Washington, DC., April 10, 1997.

Hon. THAD COCHRAN,
Chairman, Subcommittee on Agriculture, Rural Development, and Related Agencies,
Committee on Appropriations, U.S. Senate, Washington, DC.

DEAR MR. CHAIRMAN: I am writing to inform you of our plan to reallocate funds which were identified in the fiscal year 1997 Senate Appropriations Committee Report, and adopted in the Conference Report, to more accurately reflect fiscal year 1997 costs of the National Center for Toxicological Research (NCTR). As described in the enclosed information, the estimate the Food and Drug Administration (FDA) provided to the Committee for inclusion in the fiscal year 1997 report, was substantially higher than the base funding level for NCTR. The resources resulting from this action have been reallocated to other program activities. These reallocations have been reflected in the fiscal year 1998 Congressional Justification. We regret any confusion that this has created.

Also enclosed is information informing the Committee of FDA's plans to implement the regulations on nicotine-containing tobacco products, and to more appropriately allocate the funds remaining under "Program Management," thus eliminating that as a separate budget activity. In addition, FDA plans to reduce the amount of funding for the Orphan Product Grants program to help defray the costs of pay increases and inflation absorbed by the agency. This reduction in funds may result in a decrease in the number of new grants awarded in fiscal year 1997.

The specific impact of each funding reallocation on program activities is detailed in the enclosure to this letter. The enclosure summarizes these changes by program activity.

I appreciate the Committee's continued interest in and support of the activities of the Food and Drug Administration.

Sincerely,

DONNA E. SHALALA.

Enclosure.

THE FOOD AND DRUG ADMINISTRATION

PROPOSED REALLOCATIONS—FISCAL YEAR 1997

National Center for Toxicological Research (NCTR)

Senate Committee Report Funding Table: \$37.0 million

Fiscal Year 1997 Current Estimate: \$31.3 million

NCTR relies on a high level of contract support for managing its facilities, maintaining its animal colonies, and for many other research support services. In past years, FDA has redirected funds toward the end of the year from other programs to NCTR for its contract support. NCTR's operating budget is then reduced by the same amount at the beginning of the next year so that the base level of funding remains relatively constant. The agency is not able to provide these additional funds to the NCTR at a consistent level every year, but endeavors to keep the NCTR funded at a "base" level of funding necessary to sustain its current level of operations, including mandated contract labor increases. The amount FDA provided to the Committee for inclusion in the fiscal year 1997 Committee report was based on fiscal year 1995 actual obligations (when a substantial amount of funds were redirected to NCTR) and a fiscal year 1996 estimated obligation level that proved to be too

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high. The fiscal year 1997 estimate in the fiscal year 1998 Congressional Justification reflects, the current planned level of funding for NCTR and for all other Centers.

ADDITIONAL INFORMATION

Regulation of Nicotine-Containing Tobacco Products

Senate Committee Report Funding Table: Not separately identified

Fiscal Year 1997 Current Estimate: \$4.9 million

The fiscal year 1998 Congressional Justification establishes Tobacco as a separate program activity to adequately reflect the resources planned for FDA activities related to the regulation of nicotine-containing tobacco products. FDA plans to devote approximately \$4.9 million during fiscal year 1997 to implement the regulation of nicotine-containing tobacco products. In previous years, funding for the tobacco initiative came from funds allocated to the Office of the Commissioner. Funding for this effort in fiscal year 1997 will come from general reductions in funding for "Other Activities." Although we intend to report our costs for this initiative separately, this effort will be housed, for administrative purposes, within the Office of Policy, at least through the initial implementation stage.

As you know, on August 23, 1996, President Clinton approved FDA's final rule for the regulation of nicotine-containing tobacco products. The final rule limits the availability and appeal of tobacco products to young people. Our goal is to promote and protect the health of our nation's youth by reducing the easy access and strong appeal of these products to children, before they become addicted.

Our efforts during fiscal year 1997 will focus on outreach and preliminary enforcement activities. The new rule requires certain actions to be implemented during fiscal year 1997. The requirement for vendors to check age/photo ID's before selling these products to young people by February 28, 1997, has been implemented. All other provisions of the regulation, except those related to sponsorship, are to be implemented by August 28, 1997. Approximately \$2 million of the total fiscal year 1997 budget will be allocated to States to provide training for State and local officials who will help enforce FDA's rule. The remainder of the budget will be used for outreach activities to educate and mobilize state and local public health, law enforcement, and other officials and to raise awareness about the new rule with community organizations, parent groups, voluntary health groups and others.

Program Management

Senate Committee Report Funding Table: \$6.1 million

Fiscal Year 1997 Current Estimate: Not separately identified

In its fiscal year 1997 report, the Committee requested a new presentation of Other Activities. A significant portion of what had been Program Management was moved to Other Activities. The only portion of Program Management remaining after this change, was related to Direct Field Management. Since funding for all other field activities are reflected in the appropriate program lines, we are doing the same for Direct Field Management, thus eliminating Program Management as a separate program activity.

Orphan Products Grants

Senate Committee Report Funding Table: \$12.2 million (excludes extramural services)

Fiscal Year 1997 Current Estimate: \$11.3 million

During fiscal year 1997, FDA plans to reduce the funding for Orphan Product (OP) grants. FDA's budget has been at a constant level for the past three years. In real terms, however, the agency's resources have been declining due to pay cost increases and inflation absorbed by the agency. Because of this, we have had to reduce many operating costs. During this same time, the OP grant program has not been reduced. In fiscal year 1997, however, we plan to reduce the funding for OP grants to \$11.3 million. Please also note that, in the fiscal year 1998 Congressional Justification, the cost of the OP grants program has been moved from "Other Activities" and included in the program activities directly related to these grants (Human Drugs and Medical Devices and Radiological Products). This is consistent with all other grant programs.

FOOD AND DRUG ADMINISTRATION FISCAL YEAR 1997 APPROPRIATION ESTIMATES

[Dollars in thousands]

Program	Fiscal year 1997 Senate Committee recommendations—			Changes—			Fiscal year 1998 congressional budget request—Fiscal year 1997 appropriations—			
	Program totals	PDUFA/MQSA	S&E	Tobacco	SBIR and OPD grants	Program management	Other changes	Program totals	PDUFA/MQSA	S&E
Foods	\$194,156	.....	\$194,156	.....	.....	\$2,377	\$3,702	\$200,235	.....	\$200,235
Human drugs	237,524	(51,779)	185,745	.....	\$11,345	1,463	1,537	252,081	(\$51,991)	200,090
Biologics	119,528	(27,992)	91,536	.....	.....	244	(659)	122,435	(31,314)	91,121
Animal drugs	38,022	.....	38,022	.....	.....	366	(857)	37,531	.....	37,531
Medical devices and radiological products	152,735	(13,403)	139,332	.....	665	1,645	5,257	160,302	(13,403)	146,899
NCTR	36,977	.....	36,977	.....	.....	.....	(5,670)	31,307	.....	31,307
Program management	6,094	.....	6,094	.....	.....	(6,094)	.....	.....	.....	.....
Tobacco .....	.....	.....	.....	\$4,914	.....	.....	.....	4,914	.....	4,914
Other activities:										
Office of the Commissioner	15,365	(175)	15,190	(1,422)	.....	.....	(2,446)	11,417	(95)	11,322
Office of Policy	2,825	.....	2,825	(1,164)	.....	.....	316	1,977	.....	1,977
Office of External Affairs	16,140	.....	16,140	(518)	.....	.....	(1,317)	14,251	.....	14,251
Office of Management and Systems	55,082	(7,582)	47,500	(905)	.....	.....	(1,666)	49,057	(4,128)	44,929
Office of Operations/Orphans	12,868	.....	12,868	(905)	(12,010)	.....	2,131	2,084	.....	2,084
Central Services	11,548	.....	11,548	.....	.....	.....	(1,001)	10,547	.....	10,547
Subtotal, other activities	113,838	(7,757)	106,071	(4,914)	(12,010)	.....	(4,037)	89,333	(4,223)	85,110
Other rent and rent-related activities	22,039	22,039	726	22,765	22,765
Total	920,903	(100,931)	819,972	920,903	(100,931)	819,972

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Question. Why is the agency proposing to eliminate the program management line-item after the Committee sought to separately identify those costs in cooperation with the agency last year?

Answer. The fiscal year 1997 Senate Committee report language directed FDA to make a number of changes to its budget structure, primarily to more clearly delineate funding among the various components of the Agency. In working on the requested changes, we recognized this as an opportunity to make other changes that would result in a more understandable and consistent budget presentation. One of the Committee's directions was to split the line for "Program Management", and to spread back funding directly attributable to each program and to 'other activities' as appropriate. This would help provide the true costs of funding each program. Redirecting these costs left only \$6,094,000 in the old program management line for funding of Direct Field Management. Since all other field costs had been appropriately spread to the programs, we believed that it was consistent to spread the field management costs to the programs as well in order to achieve an understanding of the full cost for each program. The roughly \$6.1 million was spread back to each program to which funding was directly attributable. For Foods, the amount is \$2,377,000, for Human Drugs, \$1,463,000, for Biologics, \$244,000, for Animal Drugs and Feeds, \$366,000, and finally for Medical Devices, \$1,645,000.

Question. Please explain which line-items are being increased as a result of the \$5.670 million reduction for National Center for Toxicological Research (NCTR) and the specific programs and activities receiving enhanced funding as a result and the reasons for each increase.

Answer. The adjustment of \$5.7 million in the amount planned for NCTR in fiscal year 1997 is not really a reallocation to other programs, but an adjustment to reflect the true continuing costs of FDA's major programs. The estimate for NCTR furnished to the Committee in mid-1996 was too high because it was based on an unusually-high level of funding for NCTR in fiscal year 1995.

The reason that the obligations for NCTR were unusually high in fiscal year 1995 relates to the nature of NCTR's operating budget, which includes a number of support service contracts. NCTR relies on a high level of contract support for managing its facilities, maintaining its animal colonies, and for many other research support services. In past years, FDA has redirected funds toward the end of the year from other programs to NCTR for its contract support. NCTR's operating budget is then reduced by the same amount at the beginning of the next year so that the overall level of funding remains relatively constant. The Agency is not able to provide these additional funds to the NCTR at a consistent level every year, but endeavors to keep NCTR funding at a "base" level necessary to maintain its current level of operations. The Agency's current estimate for NCTR for fiscal year 1997 of \$31.3 million is very similar to NCTR's actual expenditures for fiscal year 1996 of just under \$31 million. The current fiscal year 1997 estimate reflects the current planned level of funding for NCTR and for all other programs.

Again, all of these adjustments are not truly program increases or decreases, but adjustments to more accurately reflect the continuing cost in fiscal year 1997 of the level of program activities conducted in fiscal year 1996. However, since the fiscal year 1997 appropriation did not include inflationary allowances, all programs have had to absorb a reduction in their operating funds, and NCTR has had to absorb its proportionate share of this reduction. To partially compensate for this, the Agency did allocate an increase of \$533,000 to NCTR early in fiscal year 1997 to absorb some of the inflation in NCTR's contract costs.

Question. The agency indicates that the new line-item of \$4.9 million for the regulation of tobacco was created through a reduction in "Other activities". Please explain which line-items under "Other activities" were reduced, the impact of each reduction on the specific office or activity from which these funds were taken. Is the funding being moved from each of these "Other activities" that previously dedicated to tobacco? If not, what is the impact of the reduction being taken to provide increased funding for tobacco?

Answer. Yes, the funding for fiscal year 1997 is indeed coming from the budgets of these same offices, and represents funding previously dedicated to tobacco activities. I would be happy to provide, for the record, a table showing the offices from where tobacco funding was taken in fiscal year 1997.

[The information follows:]

Fiscal year 1997 current estimate

Tobacco	+ \$4,914,000
Other activities:	
Office of the Commissioner	(1,422,000)
Office of Policy	(1,164,000)

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Office of External Affairs	(518,000)
Office of Operations	(905,000)
Office of Management and Systems	(905,000)
Total, tobacco funding	(4,914,000)

Question. What is the reason for the increase in non-GSA rent and rent-related activities?

Answer. The increase in the S&E Rent and Related as shown in the explanatory notes was based on the current estimated costs projected at the time the President's Budget was presented. FDA has since further refined its estimates, and to show the various elements of these costs we are providing a chart which shows actual obligations since fiscal year 1992 and a revised fiscal year 1997 estimate.
[The information follows:]

FIVE-YEAR HISTORY OF S&E RENT AND RELATED ACTIVITIES

[Dollars in thousands]

	Fiscal year—					
	1992	1993	1994	1995	1996	1997 est.
Commercial rent and related services	\$5,917	\$5,865	\$6,544	\$6,510	\$6,558	\$6,558
Costs for FDA owned facilities	3,254	3,997	4,332	4,711	5,205	5,205
GSA rent-related services	3,599	3,857	4,925	6,866	6,719	7,019
GSA building delegation services ¹	5,341	5,306	3,630	3,580	3,976	5,418
Total, S&E rent and related	18,111	19,025	19,431	21,667	22,458	24,200

¹The fiscal year 1997 estimate of \$5.4 million for costs related to building delegated to FDA includes \$1.4 million for MODULE II, FDA's new Lab facility in Beltsville, MD.

The new fiscal year 1997 estimate is based primarily on the costs associated with MOD II. MOD II is a state-of-the-art laboratory, built and owned by GSA on FDA land. FDA took occupancy of MOD II on October 21, 1996. MOD II has recently been added by GSA to FDA's inventory of delegated buildings for operation and maintenance. Additional S&E appropriated funds are required to supplement the funds provided by GSA for the MOD II delegation. These funds will be used for the operation and maintenance of the facility above GSA's standard level 8 hour day. The estimated total costs associated with MOD II did not become apparent until after the first estimates, those used for the President's Budget Appendix and the explanatory notes, had been printed. The new estimate of \$24.2 million includes \$1.4 million to cover the costs of MOD II coming on line.

Question. The reprogramming letter indicates that a reduction in the amount provided by the Committee for Orphan Product Grants, from \$12.2 million to \$11.3 million is being taken to accommodate pay cost increases and inflation absorbed by the agency. Why is this grant program being reduced to cover these costs? What other program reductions have been made from the fiscal year 1996 levels to cover pay, inflation and other mandatory cost increases in fiscal year 1997?

Answer. FDA's budget has been at a constant level for the past three years. In real terms, however, the Agency's resources have declined as inflationary increases for pay and other operating costs have been absorbed by the Agency. Because of this, FDA has had to reduce many operating costs across most program areas. During this same time, the Orphan Product grant program has not been reduced. In fiscal year 1997, however, we have had to make the very difficult decision of reducing the funding for Orphan Product grants to \$11.3 million, as we continue to absorb inflationary increases.

Question. The agency indicated that the \$12,868,000 provided by the Committee for Orphan Product Grants and extramurals is being reduced by \$905,000 for tobacco, \$12.010 million for SBIR and Orphan Product Grants, and that "other changes" are resulting in an increase of \$2.131 million, for a net total of \$2.084 million. Why is the Orphan Product Grants Program being shifted to Human Drugs?

Answer. Grant programs that are specifically tied to certain program areas are generally reflected in that program area. Thus, for the fiscal year 1998 budget request we moved the Orphan Grants program, which is clearly a Human Drugs program, into that activity line. Thus, the total cost of the Human Drugs program is reflected under Human Drugs. This is consistent with the budget presentation of the President's budget that includes the Orphan Products program under Human Drugs. FDA would be happy to footnote separately in all future budget presentations the amount included for the Orphan Products program.

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Question. What specific “other changes” are being made resulting in an increase of \$2.131 million for this line-item?

Answer. Funding for the Office of Operations and administrative support for the Orphan Products program was moved from the Office of the Commissioner.

Question. What remaining programs/activities are being funded by the new proposed level of \$2.084 million for this line-item?

Answer. The net \$2.084 million will fund the staffs that support the Deputy Commissioner for Operations and administration of the Orphan Grants Program. This is slightly less than the \$2.286 million provided for these activities in fiscal year 1996.

Question. The agency has provided a table (inserted above) to the Committee showing the changes associated with the reprogramming letter. Please explain the specific changes being made to each of the line-items contained in the Committee report, the dollar amount of each increase or decrease resulting in this net change, and the reason for each.

If not provided in answering the above question, please provide the specific reductions and/or increases producing the net change reflected in the “other changes” column for each line-item, the dollar amount, and the impact of each change.

Answer. The numbers provided the Committee in the budget request when compared to the fiscal year 1997 Senate Report have changed due to a variety of factors—elimination of program management as a separate activity line, an unusually high fiscal year 1995 actual at the NCTR, the addition of tobacco as a separate program, changes in field workloads which caused the shifting of funds between activity areas, a new display for grants under the Orphan Products and Small Business Innovative Research programs, and a new line item under Other Activities for the costs of the Office of Operations and the administrative support for the Orphan Products program.

The information initially provided, when the Committee recommendations directed the changes in mid-1996, was based on fiscal year 1995 actuals and any mid-year fiscal year 1996 estimates available at the time. We now realize that these were not good estimates of 1996 breakouts. The differences between 1996 estimates and actuals are a significant part of the difference between the Committee’s recommendation for fiscal year 1997 and our current resource estimates.

Generally, at the start of each fiscal year, we look at how to manage our resources within the environment of having to absorb all inflationary costs associated with pay raises and other operational increases beyond our control, plus having to plan for unknown contingencies or events that may develop during the course of the year. We have not received funding to cover current services for the past three years. Because FDA is a very payroll intensive agency, we must first assure that our payroll costs will be met. As a result of inflation absorption and the need to plan for unknown circumstances, we reduce operating budgets through prorata agency-wide decreases—across the centers and the offices—at the start of the year. For fiscal year 1997, we held back about \$5 million, or one-half of one percent, for these potential exigencies. Throughout the course of the year, as events unfold, we allocate previously unallocated funds to FDA organizations based on priorities established by top management. This is the reason that we cannot provide a track of each and every dollar from one activity to another. The money is held back in a reserve at the start of the year, and is subsequently re-allocated, in many cases, back to the same activities.

The resulting changes in the current fiscal year 1997 Appropriation column of the fiscal year 1998 Congressional Justification reflect the estimates at that time of the allocation of FDA resources.

In addition, the Committee’s direction for a new display of our resources provided us an opportunity to further streamline our budget presentation. We have traditionally combined funding by program which covered costs for the center itself, its field components, plus some portion of overhead. The Committee’s direction required the overhead to be shown separately under the new Other Activities line. This greatly cleaned up the structure of our request, which was an advantage to us as well as the Committee.

FDA seeks to provide the Committee with the best information on how the agency resources are and will be managed, consistent with congressional direction, and we will continue working with Committee staff to assure that our budget is understandable and consistent.

It has been difficult to adjust to the Committee’s program structure modifications, as directed in the Committee’s Report on FDA’s fiscal year 1997 Appropriations. The Agency regrets any confusion that may have been created by some of its preliminary estimates, and by the presentation changes made in the fiscal year 1998 President’s budget and the subsequent reprogramming letter. The Agency has made several

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changes in its planning and budgeting systems to better manage according to the Committee's program structure, and we believe that improvement is reflected in the fact that the Agency's current estimates are not very different from the estimates included in the explanatory notes.

Further, the Agency is planning the purchase and implementation during fiscal year 1997 of new software that will greatly enhance our ability to manage costs according to the Committee program structure, and the ability to plan and project future estimates. This software will be utilized by all components of the agency, and during the application design phase of the project, emphasis will be given to assuring that all agency costs will be reported and managed according to the Committee program structure.

I would be happy to provide some additional detail for your information, including a detailed crosswalk table that attempts to bridge the gap from the fiscal year 1997 Senate Report language to the fiscal year 1997 column of the fiscal year 1998 President's budget, then to our current estimate, plus some descriptions of the reasons for the changes, wherever possible.

[The information follows:]

Crosswalk table: FY97 Committee Report to FY97 Column of the FY98 Budget to FY97 Current Estimate

	(1) FY 1997 Committee Report	(2) FY98 Actual Obligations	FY96 Base Corrections Calculation & Forecasting Errors				FY97 Changes to Budget Presentation										(12) FY 1997 Current Estimate
			(3) Revolving Funding to Programs	(4) Changes to Actuals, w/ Funds	(5) FY 97 Est. Additions Col (5) (1)(1)(1)(1)	(6) Separate for Operations	(7) Delete Program Management	(8) Add Tobacco Line	(9) Move Grants to Programs	(10) Original FY 1997 Column of FY98 CJ	(11) Adjustments from 97 CJ to 97 Current Estimate						
All Dollars in Thousands	\$194,156	\$200,541	\$1,825	\$1,877	\$197,858	\$0	\$2,377	\$0	\$0	\$0	\$0	\$200,235	\$2,404	\$202,639			
Foods	185,745	202,024	1,653	(115)	187,283	0	1,463	0	11,345	0	0	200,090	(350)	199,740			
PDJFA	51,779	50,863	0	212	51,991	0	0	0	0	0	0	51,991	0	51,991			
Subtotal	237,924	252,887	1,653	97	238,274	0	1,463	0	11,345	0	0	252,081	(350)	251,731			
Biologics	91,536	87,315	641	(1,300)	90,877	0	244	0	0	0	0	91,121	(2,626)	88,295			
PDJFA	27,992	29,997	0	3,322	31,314	0	244	0	0	0	0	31,314	0	31,314			
Subtotal	119,528	117,306	641	2,022	122,191	0	244	0	0	0	0	122,435	(2,626)	119,809			
Animal Drugs	38,022	36,814	314	(1,171)	37,165	0	366	0	0	0	0	37,531	3,173	40,704			
Medical devices	139,332	143,717	1,237	4,020	144,589	0	1,645	0	685	0	0	146,899	(3,244)	143,655			
NCSA	13,403	8,357	0	0	13,403	0	0	0	0	0	0	13,403	0	13,403			
Subtotal	152,735	152,274	1,237	4,020	157,992	0	1,645	0	685	0	0	160,302	(3,244)	157,058			
NCTR	36,977	30,774	(5,670)	0	31,307	0	0	0	0	0	0	31,307	0	31,307			
Tobacco	0	0	0	0	0	0	0	0	4,614	0	0	4,614	300	4,914			
Program Mgmt	6,094	0	0	0	6,094	0	(6,094)	0	0	0	0	0	0	0			
Subtotal, Programs	765,086	790,996	0	6,845	791,881	0	0	4,614	12,010	0	0	806,505	(543)	807,892			
Other Activities	15,190	17,003	0	543	15,733	(2,989)	0	(1,335)	0	0	0	11,409	895	12,394			
OC, PDJFA	775	98	0	(60)	95	0	0	0	0	0	0	95	0	95			
Office of Policy	2,825	3,069	0	316	3,141	0	0	(1,093)	0	0	0	2,048	657	2,705			
Office of External Affairs	16,140	14,755	0	(1,371)	14,769	0	0	(486)	0	0	0	14,283	376	14,659			
Office of Operations/Orphan Admin	0	0	0	0	0	0	0	(850)	0	0	0	2,139	1,427	3,566			
Contract Management & Systems	47,900	48,488	0	(1,666)	46,834	2,989	0	(850)	0	0	0	44,984	(2,040)	42,944			
OHS, Policy	12,862	4,101	0	(3,454)	4,178	0	0	0	0	0	0	4,178	0	4,178			
Orphan Grants/External Contracts	12,868	4,101	0	(1,666)	4,178	0	0	0	0	0	0	4,178	0	4,178			
Central services	11,548	11,049	0	(1,003)	10,547	0	0	0	(12,010)	0	0	0	0	0			
Budget authority	106,071	94,364	0	(4,037)	102,034	0	0	(4,614)	(12,010)	0	0	10,547	(2,297)	8,250			
User Fees	7,757	4,199	0	(3,534)	4,223	0	0	0	0	0	0	8,250	(652)	7,598			
Subtotal, Other Activities	113,828	98,563	0	(7,571)	106,257	0	0	(4,614)	(12,010)	0	0	89,633	(892)	88,741			
Rent & related activities	22,039	22,459	0	726	22,765	0	0	0	0	0	0	22,765	1,435	24,200			
Total, Budget authority	819,972	818,408	0	0	819,972	0	0	0	0	0	0	819,972	0	819,972			
Total, User Fees	100,931	93,610	0	0	100,931	0	0	0	0	0	0	100,931	0	100,931			
Total, FDA S&E	\$920,903	\$912,018	\$0	\$0	\$920,903	\$0	\$0	\$0	\$0	\$0	\$0	\$920,903	\$0	\$920,903			

1/ Through column 5, includes funding for Office of Operations, with the administrative support for the Orphan grants program.

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Crosswalk Table Explanatory Notes:

1. *Fiscal year 1997 Committee Report.*—Reflects the activity lines and dollars amounts found in the fiscal year 1997 Senate Subcommittee Report language, based on numbers from fiscal year 1995 actuals and mid-year fiscal year 1996 estimates.

2. *Fiscal year 1996 Actual Obligations.*—Reflects actual obligations for fiscal year 1996 for comparison purposes. Note that costs for tobacco are included under Other Activities for this column, and that funding for the Office of Operations (and the administrative support for the Orphan Products Grants program) are included under the Office of the Commissioner. In several cases, these fiscal year 1996 actuals were significantly different from the fiscal year 1996 projections used by the Committee.

Columns 3 and 4 represent corrections for changes between fiscal year 1996 mid-year estimates and fiscal year 1996 actuals, which includes field workload adjustments, as well as some forecasting and calculation errors we have uncovered.

3. *Restore NCTR Funding to Programs.*—The reduction of \$5,670,000 in the amount planned for NCTR in fiscal year 1997 is an adjustment to reflect the true continuing costs of FDA's major programs. The estimate for NCTR furnished to the Committee in mid-1996 for inclusion in the report was too high because it was based on funding in fiscal year 1995 that included significant one-time money.

The reason for this relates to the nature of NCTR's operating budget, which includes a number of support service contracts. NCTR relies on a high level of contract support for managing its facilities, maintaining its animal colonies, and for many other research support services. In past years, toward the end of the year, FDA has redirected remaining funds from other programs to NCTR for its contract support. The Agency endeavors to keep NCTR funding at a "base" level necessary to maintain its current level of operations. The Agency's current estimate for NCTR for fiscal year 1997 of \$31,307,000 is in line with NCTR's actual expenditures for fiscal year 1996 of just under \$30,774,000, and incorporates a \$533,000 increase over the fiscal year 1996 funding level to cover increased contract costs.

4. *Changes for fiscal year 1996 Actuals with Field Adjustments.*—This column reflects the differences between fiscal year 1996 actuals, including changes in field workloads, and some calculation/forecasting errors made in developing the budget display numbers used in the report language. Each year, unanticipated events and changes in workload affect estimates made for field activities as they relate to each program area. We have attempted to reflect these shifts among programs.

The numbers developed for the Senate contained an inadvertent errors regarding field costs for MQSA. Funds for field activities for MQSA were reflected under S&E, not under user fees. For the purposes of this table and for consistency with previous displays, we have included the user fees with S&E, and plan to accurately reflect the split in future tables. For PDUFA under Other Activities, the \$3,500,000 reduction reflects a management decision to shift investment fund control for information resources back to the Centers for Drugs and Biologics.

5. *Fiscal year 1997 Estimated Adjustments.*—Provides an adjusted fiscal year 1997 estimate to reflect the changes shown in columns 3 and 4. This column is calculated by adding columns (1), (3), and (4). Column (5) serves as a more comparable starting point for cross-walking to the fiscal year 1997 column of the fiscal year 1998 Congressional justification.

6. *Separate funding for Office of Operations (and administrative support for the Orphan Product Grants program).*—Reflects support costs for these offices, in conjunction with individual representation of each major office within FDA's structure.

7. *Delete Program Management.*—The \$6,094,000 is the remaining portion of field activity of what the agency formerly referred to as "program management". Since funding for all other field activities are reflected in the appropriate program lines, we are doing the same for Direct Field Management, thus eliminating Program Management as an activity. Costs included under direct field management consist of a portion of headquarters costs of the Office of Regulatory Affairs which manages FDA Field activities. In order to depict the total program costs (including all field costs), the \$6,094,000 balance was distributed to all of the programs proportionately except NCTR and Other Activities, as these areas are not supported by the field.

8. *Add Tobacco Line.*—The new display line for Tobacco shows a planned level of funding of \$4,614,000 to be included in the fiscal year 1997 column of the fiscal year 1998 President's budget. This funding is derived from reductions for the various offices under "Other Activities".

9. *Move Grants to Programs (Orphan Product Grants and Extramural Funding).*—The display in the Committee report included funding for the Orphan Product Grants and Small Business Innovative Research (SBIR) programs under Other Activities. Both of these programs are directly related to specific program areas, not the indirect nature of the funding included under Other Activities, which provides

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support across-the-board to each of the program areas. Thus, these grants are shifted back to the programs to which they relate: the drug-related activities undertaken by the Orphan Products Grants program is now under Human Drugs, and the device-related SBIR grants funding is now reflected in the Medical Devices program.

10. *Original fiscal year 1997 Column of fiscal year 1998 CJ.*—This column represents the fiscal year 1997 column of the fiscal year 1998 congressional justification.

11. *Adjustments from fiscal year 1997 CJ to fiscal year 1997 Current Estimate.*—Reflects adjustments made from the congressional justification through our current estimates for fiscal year 1997. The primary adjustments in this column are for increased funding for Food Safety in support of the President's Food Safety Initiative, and for Animal Drugs to implement the Animal Drug Availability Act. Also, increased funds are needed for Rent and Related Services for the costs of operating FDA's new Beltsville, MD, facility known as MODULE II. Funding for these initiatives was provided through pro-rated, across-the-board, operating reductions done at the beginning of the year.

The adjustments reflected under Other Activities would constitute a reprogramming from the fiscal year 1997 Congressional Justification's explanatory notes. We plan to submit a reprogramming letter to the Committee very soon. In general, increases under Other Activities for the Office of the Commissioner and the Office of Policy will be offset by reductions in the Office of Management and Systems and Central Services, accommodated through continued streamlining of contract and other support costs, and by cost reductions paid to the DHHS Program Support Center and other central costs. Overall, the Other Activities line in our fiscal year 1997 current estimate column is slightly less than the amount included in the fiscal year 1998 Congressional Justification.

12. *Fiscal year 1997 Current Estimate.*—Reflects FDA's current estimate for costs, by each activity line, for fiscal year 1997.

Question. For each program area, please break down the fiscal year 1997 and 1998 proposed levels reflected in the budget request by Center and related field activity.

Answer. I would be happy to provide a table showing the splits between the centers and field. These dollars reflect fiscal years 1997 and 1998 program areas as they appear in the Congressional Justification.

[The information follows:]

FDA S&E DIRECT APPROPRIATION

[Dollars in thousands]

Activity	Current fiscal year 1997 estimate	Fiscal year 1998—			Total
		Freeze	Req'd tobacco increase	Req'd food increase	
Centers and related field activities					
Foods	\$202,639	\$201,766	.....	\$20,000	\$221,766
Center for Food Safety and Applied Nutrition (CFSAN)	83,164	82,514	.....	12,000	94,514
Field activities	119,475	119,252	.....	8,000	127,252
Human drugs	199,740	198,734	.....	.....	198,734
Center for Drug Evaluation and Research (CDER) ¹	142,186	141,487	.....	.....	141,487
Field activities	57,554	57,247	.....	.....	57,247
Biologics	88,295	87,513	.....	.....	87,513
Center for Biologics Evaluation and Research (CBER)	75,061	74,267	.....	.....	74,267
Field activities	13,234	13,246	.....	.....	13,246
Animal drugs	40,704	40,029	.....	4,000	44,029
Center for Veterinary Medicine (CVM)	26,814	26,613	.....	4,000	30,613
Field activities	13,890	13,416	.....	.....	13,416
Medical and radiological devices	143,655	143,222	.....	.....	143,222
Center for Devices and Radiological Health (CDRH)	110,495	110,172	110,172
Field activities	33,160	33,050	33,050

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FDA S&E DIRECT APPROPRIATION—Continued
[Dollars in thousands]

Activity	Current fiscal year 1997 estimate	Fiscal year 1998—			Total
		Freeze	Req'd tobacco increase	Req'd food increase	
National Center for Toxicological Research (NCTR)	31,307	31,307	.....	.....	31,307
Other activities					
Office of the Commissioner (OC)	12,394	12,799	.....	.....	12,799
Tobacco	4,914	4,914	\$29,086	.....	34,000
Office of Policy (OP)	2,705	2,848	.....	.....	2,848
Office of External Affairs (OEA)	14,659	15,079	.....	.....	15,079
Office of Operations (OO)	3,566	3,687	.....	.....	3,687
Office of Orphan Products Development (OPD)	(1,832)	(1,887)	.....	.....	.....
Office of Science	(675)	(696)	.....	.....	.....
Office of Management and Systems (OMS)	42,944	44,089	.....	.....	44,089
FDA Central	8,250	8,100	.....	.....	8,100
Rent and related activities	24,200	25,885	.....	.....	25,885
Total, S&E budget authority	819,972	819,972	29,086	24,000	873,058

¹ Amount included for orphan product grants (CDER): Current fiscal year 1997 estimate, \$11,345,000; fiscal year 1998 freeze, \$11,345,000.

Question. What has FDA done to manage its budget within the amounts for each activity reflected in the Senate Committee report accompanying the fiscal year 1997 appropriations bill, and approved by the conference committee?

Answer. Except for the items noted in the reprogramming letter dated April 10, 1997, we have attempted to manage within the amounts for each activity reflected in the fiscal year 1997 Senate Committee report. Generally, at the start of each fiscal year, we look at how to manage our resources within the environment of having to absorb all inflationary costs associated with pay raises and other operational increases beyond our control, plus having to plan for unknown contingencies or events that may develop during the course of the year. We have not received funding to cover current services for the past three years. Because FDA is a very payroll intensive agency, we must first assure that our payroll costs will be met. As a result of inflation absorption and the need to plan for unknown circumstances, we reduce operating budgets through prorata agency-wide decreases—across the centers and the offices—at the start of the year. For fiscal year 1997, we held back about \$5 million, or one-half of one percent, for these potential exigencies. Throughout the course of the year, as events unfold, we allocate previously unallocated funds to FDA organizations based on priorities established by top management. This is the reason that we cannot provide a track of each and every dollar from one activity to another. The money is held back in a reserve at the start of the year, and is subsequently re-allocated, in many cases, back to the same activities.

The Committee's direction for a new display of our resources provided us an opportunity to further streamline our budget presentation. We have traditionally combined funding by program which covered costs for the center itself, its field components, plus some portion of overhead. The Committee's direction required the overhead to be shown separately under the new Other Activities line. This greatly clarified the structure of our request, which was an advantage to us as well as the Committee.

It has been difficult to adjust to the Committee's program structure modifications, as directed in the Committee's Report on FDA's fiscal year 1997 Appropriations. The Agency regrets any confusion that may have been created by some of its preliminary estimates, and by the presentation changes made in the fiscal year 1998 President's budget and the subsequent reprogramming letter. The Agency has made several changes in its planning and budgeting systems to better manage according to the Committee's program structure, and we believe that improvement is reflected in the fact that the Agency's current estimates are not very different from the estimates included in the explanatory notes.

Further, the Agency is planning the purchase and implementation during fiscal year 1997 of new software that will greatly enhance our ability to manage costs according to the Committee program structure, and the ability to plan and project future estimates. This software will be utilized by all components of the agency, and during the application design phase of the project, emphasis will be given to assur-

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ing that all agency costs will be reported and managed according to the Committee program structure.

FDA seeks to provide the Committee with the best information on how the agency resources are and will be managed, consistent with congressional direction, and we will continue working with Committee staff to assure that our budget is understandable and consistent.

GENERIC DRUG APPROVALS

Question. In the Conference Report that accompanied H.R. 3603 (Report 104-726), the Appropriations Committees directed FDA to “use available funds to ensure compliance with its 180 day statutory review period for generic drug applications.” What steps has FDA taken to respond to this request? Please list the dates on which any remedial action was taken.

Answer. FDA has taken a number of actions to enhance compliance with its 180 day statutory review period for generic drug applications. These actions have been taken to improve efficiencies in the application review process. At the end of fiscal year 1996, there was a backlog of 46 overdue applications, meaning abbreviated new drug applications, or ANDA’s, pending greater than 180 days. In addition, 71 chemistry supplements were overdue. As a reference, at the end of fiscal year 1995, there were 58 ANDA’s and 104 supplemental applications overdue. Thus, FDA has substantially reduced the backlog of overdue applications and supplements.

FDA has implemented new faxing and teleconference procedures, and has begun faxing the review/comments/deficiencies to applicants during this fiscal year. Additionally, for most “minor” issues, applicants will be able to submit responses via facsimile. If the fax response is received from an applicant within 30 days, the reviewer will then complete review of the application. If it is not received within 30 days, then this would be classified as a minor amendment. Currently, responses to minor amendments are placed in a queue and reviewed within 60 days.

In fiscal year 1996, FDA also implemented a procedure for public release of bioequivalence protocols and protocol reviews. It is anticipated that by providing public access to this information, there will be fewer protocols submitted for review, thus decreasing the Division’s protocol workload and allowing more time to be spent on application reviews. By releasing the first protocol for a drug, FDA no longer has to review duplicative protocols thereby freeing up more resources to conduct timely reviews.

Also, FDA initiated a procedure to contact applicants that undergo two or more major deficiency cycles during the review process. Applicants are requested to contact FDA for discussion or clarification regarding the deficiencies. If FDA is not contacted, the Office will call the applicant within 30 days to see if any further discussion, or perhaps a meeting, is necessary. It is hoped that this interaction will prevent additional major deficiency cycles and shorten total time to approval.

In 1996, FDA’s Office of Generic Drugs, or OGD, hired a medical officer to improve timeliness of reviews of ANDA’s with bioequivalence studies with clinical endpoints. In the past, these complicated studies were referred to the Office of Review Management for review, and then returned to the OGD for final processing after completion of the scientific review.

The Office of Generic Drugs has implemented its program for electronic submission of bioequivalence data. The program was developed under contract with the University of Maryland. Under the program, applicants that choose to may prepare electronic submissions on diskette with the aid of a user-friendly program call Entry and Validation Program. The program is expected to have a very positive impact on the efficiency of reviews, ultimately reducing review times.

Question. In your opinion, why is FDA exceeding the statutory requirement that Abbreviated New Drug Application (ANDA) be reviewed in 180 days?

Answer. Staffing reductions coupled with an increased number of submissions of original applications have had a significant detrimental impact on review times.

Question. Since 1990, what have been the mean and median review times for New Drug Applications, ANDA’s and ANDA supplements?

Answer. I will be happy to provide this information for the record.
[The information follows:]

Fiscal year	NDA's		ANDA's		ANDA supplements	
	Mean	Median	Mean	Median	Mean	Median
1990	31.7	23.8	25.0	23.0	N/A	N/A
1991	29.2	24.2	36.3	32.7	N/A	N/A

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Fiscal year	NDA's		ANDA's		ANDA supplements	
	Mean	Median	Mean	Median	Mean	Median
1992	30.0	24.2	35.4	34.5	N/A	N/A
1993	34.3	26.8	40.4	39.7	N/A	N/A
1994	27.3	20.8	29.4	24.4	N/A	N/A
1995	25.7	18.7	35.3	28.2	N/A	N/A
1996	19.6	15.0	33.2	24.7	N/A	N/A

Question. List the ANDA's that are currently being delayed because of an outstanding scientific or regulatory bioequivalence issue, and provide the mean time the application has been pending before FDA.

Answer. FDA is not permitted to specifically discuss pending applications. However, the types of drug products that may take longer to approve are nonsystemically absorbed drug products that require more extensive bioequivalence testing and others that raise especially complex scientific issues.

Question. Since 1990, what has been the mean and median review cycle in months for ANDA's and ANDA supplements?

Answer. I will be happy to provide this information for the record.
[The information follows:]

REVIEW CYCLE TIMES (MONTHS) FOR ANDA'S AND AADA'S ^{1 2 3}

Year	Originals		Supplement median ^{4 5}	
	Mean	Median	Major	Minor
OCT 89	6.7	6.7	6.2	.....
NOV 89	7.5	7.6	6.4	.....
DEC 89	8.6	8.1	6.6	.....
JAN 90	8.9	8.4	6.1	.....
FEB 90	9.2	8.9	7.8	.....
MAR 90	9.0	8.9	8.0	.....
APR 90	9.9	9.4	8.1	.....
MAY 90	10.1	9.9	8.8	.....
JUNE 90	10.2	11.1	9.3	.....
JUL 90	12.6	11.5	10.4	.....
AUG 90	11.9	12.4	11.1	.....
SEP 90	13.9	13.7	12.4	.....
OCT 90	12.2	11.8	12.8	.....
NOV 90	15.6	13.8	13.3	.....
DEC 90	14.9	14.6	12.3	.....
JAN 91	13.0	12.9	11.4	.....
FEB 91	12.6	13.5	14.4	.....
MAR 91	12.6	13.2	12.1	.....
APR 91	14.6	13.3	12.9	.....
MAY 91	13.9	12.4	9.3	.....
JUN 91	12.7	12.7	12.3	.....
JULY 91	12.0	12.0	11.1	0.7
AUG 91	11.8	10.9	13.0	0.8
SEP 91	12.2	9.3	12.2	1.5
OCT 91	12.5	9.6	10.7	2.1
NOV 91	9.7	7.9	13.1	1.2
DEC 91	12.0	9.1	14.7	1.7
JAN 92	10.9	8.5	11.1	1.2
FEB 92	11.3	9.1	9.9	1.2
MAR 92	9.3	7.1	12.3	1.3
APR 92	8.7	7.2	9.9	1.3
MAY 92	7.8	5.4	11.1	1.8
JUN 92	7.8	5.8	6.2	1.5
JUL 92	6.6	4.6	6.6	1.1
AUG 92	5.8	3.8	5.7	1.4

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REVIEW CYCLE TIMES (MONTHS) FOR ANDA'S AND AADA'S^{1 2 3}—Continued

Year	Originals		Supplement median ^{4 5}	
	Mean	Median	Major	Minor
SEP 92	6.8	4.7	5.9	1.5
OCT 92	5.2	4.4	5.5	1.3
NOV 92	4.3	4.2	5.1	1.5
DEC 92	5.1	4.8	5.2	1.4
JAN 93	6.1	4.9	4.9	1.6
FEB 93	6.0	5.4	5.9	1.2
MAR 93	5.0	4.7	4.8	1.5
APR 93	5.3	4.9	5.2	1.5
MAY 93	4.8	4.7	4.4	1.4
JUN 93	4.9	4.9	5.1	1.8
JULY 93	5.3	4.9	4.9	2.0
AUG 93	5.5	5.0	4.1	1.2
SEP 93	7.3	5.2	4.7	1.4
OCT 93	5.2	5.2	4.7	2.0
NOV 93	7.1	5.3	4.5	1.6
DEC 93	5.5	5.1	4.2	1.4
JAN 94	5.6	5.1	4.7	2.0
FEB 94	7.0	6.0	6.2	2.5
MAR 94	5.2	4.9	5.4	1.4
APR 94	5.9	5.6	5.2	1.4
MAY 94	4.9	4.8	3.7	0.9
JUN 94	6.4	4.9	4.4	1.2
JULY 94	4.5	4.3	4.0	1.1
AUG 94	5.3	4.8	4.3	1.8
SEP 94	4.5	3.8	3.9	0.9
OCT 94	5.2	4.5	4.1	1.5
NOV 94	4.9	4.7	3.8	1.8
DEC 94	5.6	4.8	4.3	1.2
JAN 95	5.4	5.4	4.8	2.0
FEB 95	5.1	4.9	4.8	1.2
MAR 95	4.9	5.0	4.3	1.1
APR 95	5.6	5.0	5.8	1.3
MAY 95	5.5	5.4	4.8	1.4
JUN 95	5.2	5.1	4.6	1.6
JULY 95	5.6	5.4	4.4	0.9
AUG 95	5.1	5.4	4.6	1.8
SEP 95	5.6	5.8	4.6	1.2
OCT 95	5.9	5.7	5.7	1.6
NOV 95	6.5	6.6	5.6	2.2
DEC 95	6.4	6.3	4.9	1.0
JAN 96	6.5	6.4	5.6	2.0
FEB 96	6.6	6.7	6.5	1.6
MAR 96	7.0	6.9	5.2	1.2
APR 96	6.3	6.4	4.9	1.6
MAY 96	6.3	6.1	5.2	1.4
JUN 96	5.5	5.1	4.2	1.5
JULY 96	5.8	6.0	5.1	1.6
AUG 96	5.1	5.1	4.7	1.5
SEP 96	5.1	5.2	4.4	2.3
OCT 96	5.4	5.5	5.3	1.2
NOV 96	5.7	6.1	5.0	1.6
DEC 96	5.7	5.9	4.9	1.6

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REVIEW CYCLE TIMES (MONTHS) FOR ANDA'S AND AADA'S^{1 2 3}—Continued

Year	Originals		Supplement median ^{4 5}	
	Mean	Median	Major	Minor
JAN 97	5.9	5.7	5.1	1.8
FEB 97	5.6	5.1	4.8	1.2

¹ Amendments for both originals and supplements are counted under the review cycle times.

² Times correspond to actual applications received. The new ANDA/AADA submission policy that went into effect 1/1/91 allows certain variations in a drug product to be included in a single application.

³ In September 1991, the OGD started implementation of the Application Integrity Policy by suspending review of applications suspected of being tainted by fraud. AIP time has been subtracted from review time above for the period after 9/91. However, before the AIP went into effect, the review of many applications suspected of containing fraudulent data were suspended. These suspensions were not recorded in the MIS and are not reflected in the above chart.

⁴ Mean supplement review cycle times are not captured by the Office of Generic Drugs.

⁵ Median supplement review times are broken out by major and minor reviews (starting in July 1992). An amendment to a supplement may be classified as minor when an experienced review chemist can reasonably be expected to take less than one hour to complete the review. Major amendments are all other reviews of amendments to supplements.

Question. Since 1990, what have been the mean and median review times for consults sent from the Office of Generic Drugs (OGD) to the New Drug Division?

Answer. The Office of Generic Drugs—OGD—does not calculate the mean and median review times for consults sent to the Office of Review Management—ORM. However, it can be safely stated that many consults take months to well over a year to be returned to OGD. Upon return of the consults, OGD must still review ORM's comments and prepare a deficiency letter, if applicable, for the applicant. In the fall of 1996, OGD hired a medical officer to improve the timeliness of reviews of abbreviated new drug applications that include bioequivalence studies with clinical endpoints.

Question. How many ANDA's and ANDA supplements has FDA received each year since 1990?

Answer. I will be happy to provide this information for the record.
[The information follows:]

Fiscal year	ANDA/AADA received	ANDA supplements received
1990	352	3,946
1991	300	2,632
1992	339	3,117
1993	308	3,506
1994	332	2,528
1995	404	2,694
1996	378	2,521

Question. How many ANDA's and ANDA supplements has FDA approved each year since 1990?

Answer. I will be happy to provide this information for the record.
[The information follows:]

Fiscal year	ANDA/AADA approved	ANDA supplements approved
1990	73	2,489
1991	¹ 141	3,413
1992	239	3,470
1993	215	2,635
1994	255	2,486
1995	288	2,466
1996	340	2,730

¹ In 1991, there were 141 approvals and 4 tentative approvals. The tentative approvals were counted previously and should not have been included in the count.

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Question. Since 1990, what have been the annual FTE ceilings at OGD and the number of personnel on board? Please break out these figures by category, e.g., chemistry reviewers, bioequivalence reviewers, etc.

Answer. I will be happy to provide this information for the record.
[The information follows:]

OFFICE OF GENERIC DRUGS

Fiscal year	Program FTE ¹	Chemistry reviewers	Bioequivalence reviewers	Labeling reviewers	On board	FTE ceiling
1990	41	33	28	7	109	121
1991	56	42	28	8	134	132
1992	57	53	30	10	150	150
1993	62	51	28	8	149	155
1994	60	50	26	9	145	155
1995	59	50	26	8	143	144
1996	35	48	25	10	118	² 125

¹ Program FTE include laboratory and management staff, part-time employees, summer students and non-reviewing supervisors and scientists.

² The reduction in OGD's FTE ceiling from 155 to 125 includes two components. Approximately 16 FTE do not represent true reductions in the core review functions of the office, as these positions were transferred to the Office of Testing and Research (OTR) and the immediate staff of the Office of Pharmaceutical Science. These transfers were part of an overall reorganization of the Center, intended to make the best possible use of limited resources. The FTE transferred to OTR are still devoted to product quality research and performing the same product quality testing function as when they were part of OGD. The additional cut of 14 FTE that existed in the OGD in 1994 represent one of many examples of the agency's efforts to comply with directives to reduce the number of federal employees.

Question. Since 1990, what have been the annual salary outlays for program FTE's, primary reviewers, and total program outlays for OGD?

Answer. I will be happy to provide the average salaries for program FTE and primary reviewers for OGD.
[The information follows:]

OFFICE OF GENERIC DRUGS

Fiscal year	Program FTE	Primary reviewers	Total est. costs ¹ (salary/outlays)
1990	\$2,006,879	\$3,286,598	\$5,293,477
1991	3,394,704	4,595,226	7,989,930
1992	3,638,505	5,908,980	9,547,485
1993	4,090,543	5,688,643	9,779,186
1994	4,151,055	5,867,594	10,018,649
1995	4,187,318	5,953,800	10,141,118
1996	2,609,843	6,195,479	8,805,322

¹ Based on average salary data.

Question. FDA has a number of responsibilities that the Food, Drug, and Cosmetic Act requires be completed within a specific time frame, including the obligation to review ANDA's within 180 days. Other FDA duties may be important; however, they are not mandated by a statutory schedule.

Administrative support office activities are less likely to be subject to a statutory schedule. There are a number of administrative offices at FDA including the Office of the Commissioner, the Office of Policy, the Office of External Affairs, and the Office of Management and Systems. The fiscal year 1997 Program Level Appropriation for these offices was \$85.41 million and 954 FTE.

FDA has estimated that an additional \$13 million in annual funding above the fiscal year 1997 funding level would enable OGD to approve 90 percent of ANDA's within 180 days. These funds would permit the addition of 92 FTE in OGD and related offices.

Why couldn't FDA fully fund an effective ANDA review program by retaining the present level of funding in OGD and transferring approximately 15 percent of the resources from the above listed administrative offices, or \$13 million, to OGD?

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Answer. The \$18 million in user fees requested for generic drugs in FDA's fiscal year 1998 budget request is necessary to maintain the current resource level in the generic drug program. This \$18 million in user fees does not reflect an increase in funding in this area, and should not be construed to be program enhancement funds. If the user fees requested in this and other critical program areas are not approved, and the existing base resources are not restored, the cuts will be felt across each program area of FDA. At this point in time, I cannot say with any degree of certainty where specific cuts would be taken, but given the magnitude of the potential reduction, I can safely say that review times and backlogs for all FDA-related products would increase substantially. FDA's ability to fulfill its mission of protecting and promoting the health of the American public would be seriously undermined. Decreasing the funding available for administrative functions would be expected to reduce the agency's operating efficiency, which would adversely affect a variety of programs, including ANDA review.

Question. Describe in detail any additional funds you believe would be necessary to review 90 percent of ANDA's in 180 days. Please list the additional FTE's that you would add, break out these FTE's by category, and list where they would be assigned in the agency.

Answer. The budget provides a reasonable level of resources for FDA. As we continue to make productivity enhancements, we can review a greater percentage within 180 days. In an attempt to identify an answer to your specific question, in a preliminary survey, FDA estimates that approximately \$12.8 million and 85 FTE per year could be used to further enhance the current drug evaluation activities such as the review of original ANDA's/AADA's and chemistry supplements within 180 days, the reduction of overall approval times through a reduction in review cycles.

This \$12.8 million can be further broken down: Initial, one-time start-up costs of furniture, computer and other equipment, and recruitment would be about \$2.1 million, or \$530,300 per year spread over four years. The annual increase in the operating costs of the generic drugs program, including research, operations, and infrastructure, would be about \$4.1 million. Thus, the total annual costs to be covered by generic user fees, including the start-up costs for the first four years of \$530,300, the annual increase in operating costs of \$4.1 million, and increased salaries of \$8.2 million would be approximately \$12.8 million.

The increase of 85 FTE would be distributed as follows: OGD (70), other CDER offices (7), and the Agency (8).

Question. The International Committee on Harmonization (ICH), which includes the U.S., European Union countries, and Japan, has been meeting to seek agreement on standards for clinical trials and other related issues. Please provide the employee title and days on travel for FDA employees who have attended ICH conferences since 1990. In addition, provide a dollar figure for out-of-pocket expenses and salary costs attributable to ICH since 1990.

Answer. The International Conference on Harmonization of Technical Requirements for the Registration of Pharmaceuticals for Human Use, ICH, is a unique project that brings together the regulatory authorities of the European Union, Japan and the United States and experts from the pharmaceutical industry in the three regions to discuss scientific and technical aspects of new product registration.

Since commencing work in 1990, ICH has made recommendations and developed guidelines with the purpose of achieving greater harmonization in the requirements for registration of new medicines, in order to reduce or obviate the need to duplicate the testing carried out during the research and development and ensure a more economical use of material, animal and human resources. An overall objective is the elimination of unnecessary delay in the global development and availability of new medicines while maintaining safeguards on quality, safety and efficacy, and regulatory obligations to protect public health.

Harmonization under ICH involves the European Union, Japan and the United States, with the assistance of observers from WHO, EFTA and Canada. The six cosponsors of ICH are: the European Union, the U.S. Food and Drug Administration, the Japanese Ministry of Health and Welfare, together with the pharmaceutical industry, represented by the European Federation of Pharmaceutical Industries' Associations, the Japan Pharmaceutical Manufacturers Association, and the Pharmaceutical Research and Manufacturers of America. In addition, the International Federation of Pharmaceutical Manufacturers Associations participates as an 'umbrella' organization for the pharmaceutical industry, and provides the ICH Secretariat.

The Steering Committee appoints joint industry/regulatory Expert Working Groups to deliberate on technical aspects of harmonization. Topics were originally selected under three main subject areas, "Quality", "Safety", and "Efficacy", but in 1994, the scope was extended into multi-disciplinary topics concerned with "Regulatory Communications." ICH has developed more than 40 technical guidelines, and

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virtually all of these will be finalized by July 1997. These guidelines on technical requirements for drug submissions are intended to form the basis for allowing a single application to be submitted in each of the three regions. ICH is studying a topic proposed for the future intended to harmonize the content and format of drug submissions in the three regions. This would allow the goal of a single "global dossier" or "common technical document" to be realized. The work of ICH is coordinated and reviewed at large conferences held in two year intervals. The first large conference, ICH 1, was held in 1991 in Brussels, Belgium. The second conference, ICH 2, was held in 1993 in Orlando, Florida, and the third conference, ICH 3, was held in 1995 in Yokohama, Japan. The next large conference is scheduled for July 1997 in Brussels.

There are many ICH activities which support the development of the ICH guidelines, including meetings of the technical expert working groups and the ICH Steering Committee. I would be happy to provide a list of the attendees and the dates of the ICH conferences, along with the data related to the travel and salary and benefits costs directly related to these conferences, for the record.

[The information follows:]

ICH 1—Brussels, Belgium—November 5—7, 1991

Travel Costs: \$17,340

Salary and Benefits Costs: \$10,883

FDA Attendee Titles:

- Associate Director for Research and Regulatory Coordination, CBER
- Supervisory Chemist, Division of Neuropharmacological Drug Products, CDER
- Assistant Director (Chemistry), Office of Drug Evaluation I, CDER
- Assistant Director, Pharmacology/Toxicology, CBER
- Deputy Director, Medical Affairs, CDER
- Director, Office of Drug Evaluation II, CDER
- Acting Deputy Director, CBER
- Director, Office of Drug Evaluation I, CDER
- Director, Division Of Scientific Investigations, Office of Compliance, CDER
- Director, CDER
- Director, Office of International Affairs, Office of the Commissioner, FDA

ICH 2—Orlando, FL—October 27—29, 1993

Travel Costs: \$55,205

Salary and Benefits Costs: \$48,879

FDA Attendee Titles:

- Director, Office of Drug Evaluation II, CDER
- Supervisory Chemist, Office of Drug Evaluation I, CDER
- Assistant Director, Pharmacology/Toxicity, CBER
- Director, Office of Generic Drugs, CDER
- Acting Deputy Director, Office of Research Resources, CDER
- Supervisory Pharmacologist, Office of Oncology and Pulmonary Drug Products, CDER
- Associate Director for Medical and International Affairs, CBER
- Associate Director (Chemistry), Office of Drug Evaluation I, CDER
- Director, Division of Anti-Infective Drug Products, CDER
- Director, CDER
- Associate Director for Research, CBER
- ICH Coordinator, FDA
- Supervisory Pharmacologist, Office of Drug Evaluation I, CDER
- Director, Office of Drug Evaluation I, CDER
- Special Assistant to the Director for International Harmonization, CDER
- Associate Director for Chemistry, CDER
- Supervisor, FDA
- Director, Division of New Drug Chemistry I, CDER
- Supervisory Research Biologist, FDA
- Supervisory Consumer Safety Officer, FDA
- Director, Office of International Affairs, FDA
- Deputy Center Director, CBER
- Chemist, CDER
- Supervisory Chemist, FDA
- Administrative Technician, FDA
- Representative, FDA
- Deputy Director, Office of New Drug Chemistry, CDER
- Deputy Associate Commissioner for Health Affairs, FDA
- Chemist, CDER

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Consumer Affairs Specialist, FDA
Public Affairs Specialist, FDA
Analyst, Office of Policy, Office of the Commissioner, FDA
Director, Division Of Scientific Investigations, Office of Compliance, CDER
Medical Officer, FDA
Deputy Director, Division of Scientific Investigations, CDER
Associate Commissioner for Health Affairs, FDA
Director, Division of Biometrics, CDER
Chemist, FDA
Staff Specialist, FDA
Supervisory Chemist, FDA
Chemist, FDA
Toxicologist, Division of Toxicology and Environmental Sciences, CVM
Supervisory Medical, FDA
Senior Regulatory, FDA
Special Assistant to the Director, Center for Veterinary Medicine
Chemist, FDA
Special Assistant to the Director, CDER
Assistant to the ICH Coordinator
Consultant, FDA
Visiting Scientist, FDA
Supervisory Chemist, FDA
Director, Office of Therapeutics Research and Review, CDER

ICH 3—Yokohama, Japan—November 27-December 1, 1995

Travel Costs: \$218,447

Salary and Benefits Costs: \$67,461

FDA Attendee Titles:

Associate Director, Science and Medical Affairs, CDER
Associate Director for Medical and International Affairs, CBER
ICH Coordinator, FDA
Director, Division of Biometrics, CDER
Director, Office of Drug Evaluation I, CDER
Medical Officer, Division of Scientific Investigations, CDER
Supervisory Medical Officer, Div. of Metabolism and Endocrine Drug Products, CDER
Program Manager, Standardized Nomenclature Program, Office of Management Systems
Assistant Director for Pharmacology/Toxicity, CBER
Toxicologist, Division of Toxicology and Environmental Sciences, CVM
Director of Strategic Systems Planning Group, Office of the Commissioner
Medical Officer, Division of Clinical Trial Design and Analysis, CBER
Supervisory Pharmacologist, Div. of Oncology and Pulmonary Drug Products, CDER
Supervisory Chemist, Div. Of Medical and Surgical and Dental Drug Products, CDER
Division of Biostatistics and Epidemiology, CBER
Director, Division of Antiviral Drug Products, ODE II, CDER
Deputy Director, Division of Scientific Investigations, CDER
Deputy Commissioner for External Affairs, FDA
Special Assistant to the Deputy Director of Pharmaceutical Science, CDER
Supervisory Consumer Safety Officer, FDA
Director, Center for Biologics Evaluation and Research
Associate Director for Policy, CDER
Consumer Safety Officer, FDA
Director, Division of Clinical Trial Design and Analysis, CBER
Nurse Clinician, CDER
Associate Director for Research, CBER
Review Chemist, Division of Chemistry II, Office of Generic Drugs, CDER
Microbiologist, CBER
Director, Division of New Drug Chemistry I, CDER
Supervisory Chemist, FDA
Associate Director for Pharmacology and Toxicology, CDER
Supervisory Research Biologist, FDA
Contractor, FDA
Director, Division of Reproductive and Urologic Drug Products, CDER
Expert in Telecommunications and Electronic Data Transmission, OC

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Question. The Transatlantic Business Dialogue (TABD) is a group of U.S. companies that advocate a wide variety of positions on international trade issues. The generic pharmaceutical industry is not represented in the TABD.

The TABD recommends overturning the Bolar provisions of the 1984 Drug Price Competition and Patent Term Restoration Act (popularly known as the Hatch Waxman Act), which are critical to the availability of generic pharmaceutical products in the United States.

How many FDA dollars and days in travel have been spent by FDA employees to attend TABD conferences since 1990?

Answer. TABD is composed of both U.S. and European industry representatives. The issues, agendas, participation, and pronouncements of the TABD are all controlled by and represented to be the products of the industry participants in the TABD. FDA has had no interaction with the Transatlantic Business Dialogue, TABD, regarding their position on the Bolar Amendment. FDA representatives have attended TABD meetings to explain the Agency's position regarding the U.S.-EU negotiations toward Mutual Recognition Agreements in the pharmaceutical and medical device sectors.

In 1995 FDA expended 12 staff days, including the Veterans Day weekend, to send three people to Seville, Spain, at a cost of \$7,400. In 1996, the expenditure was 16 staff days, with one person attending a mid-year meeting in Brussels, Belgium, at a cost of \$2,100, and three people representing FDA at the TABD conference in Chicago, at a cost of \$1,400. So far in 1997, four staff days and \$2,100 have been expended for an FDA representative to attend a TABD Biotechnology Working Group in Brussels.

EXIMER LASERS

Question. On October 10, 1996, the FDA announced an amnesty policy that allows users of illegal excimer lasers (used in eye surgery), which are classified as Class III significant risk devices, to come into compliance with FDA regulations governing the use of those medical devices. Users or manufacturers of these lasers were given until January 15, 1997, to submit an Investigational Device Exemption (IDE) application to the FDA, or to submit a certification (for reimported lasers) that the laser is identical in all relevant aspects to approved lasers. To date, how many IDE applications has the Agency received?

Answer. The Agency has received 15 IDE applications from owners of unapproved excimer lasers for refractive surgery.

Question. How many IDE applications have been approved?

Answer. The agency has conditionally approved eight IDE applications for refractive surgery. The conditions for approval include limiting the number of patients as well as the refractive indications. Six of the IDE applications were disapproved and one is currently under review.

Question. What options are available to physicians or manufacturers who submit an IDE that is not adequate according to FDA regulations?

Answer. The physician or manufacturer cannot use their laser until they have received approval for their IDE. Submitters of an IDE that is disapproved have several options. The applicant can respond to the deficiencies cited in the disapproval letter and resubmit their application. In the applicant's deficiency letter a contact person is named for any questions the applicant may have in responding to the deficiencies. The Office of Device Evaluation also has an interactive review process in place for IDE submitters and urges frequent communication with the regulated industry during the review process in order to clarify ambiguities or remedy deficient information prior to completing the review.

In addition, it is our understanding from the industry that an applicant can trade-in their unapproved device for a legally marketed VISX, Inc. or SUMMIT Technology, Inc. device.

Question. How many certifications has the Agency received? How many of these certifications has the Agency accepted?

Answer. The Agency has received 13 certifications for reimported lasers. Of these, two certifications for reimported lasers manufactured by Summit Technology Inc. were accepted as complete. A small number of certifications are under consideration.

Question. For certifications not accepted, what course of action must the applicant take?

Answer. Certifications were deemed to be inadequate if the certification did not demonstrate that the laser was an approved laser. Thus, the owner of such an unapproved laser may only use the laser if the device has in effect an approved IDE or an approved PMA. Applicants whose certification was not accepted have the option of submitting IDE applications for clinical trials for their devices to obtain clinical

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data on the safety and effectiveness of the devices. In addition, the applicant may seek approval of the PMA, if the applicant has all of the necessary data and information.

Question. Has a limit been placed on the number of eyes that can be treated under each IDE application?

Answer. Yes, there is a limit on the number of eyes that can be treated under an IDE application. All IDE studies, including any IDE studies approved for excimer lasers, have a limited number of subjects and sites based on the scientific hypotheses being studied by the applicant and on statistical considerations. The typical study design for this device has between 300–400 subjects per type of visual correction or indication being studied.

The October 10, 1996, letter announcing the FDA's amnesty and IDE policy, indicates that: "The grace period does not apply to individuals who have received Warning Letters or other regulatory communications from the FDA or who are importers of lasers currently under detention."

Question. How many warning letters or other regulatory communications were sent to manufacturers or physicians who are using unapproved (black box) lasers? How many were sent to importers of lasers currently under detention?

Answer. FDA has issued four Warning Letters, or WL's, and four untitled letters, or UTL's, to black box users; and two WL's to manufacturers of black box lasers. Additionally, the Agency has issued 5 WL's as well as 1 UTL to users of gray market lasers.

Question. It has been over five months since the Agency sent the October letter. What action has the Agency taken against those who have received Warning Letters or other regulatory communications? What action will be taken against these individuals?

Answer. FDA is conducting numerous investigations in the field involving manufacturers and owners of unapproved excimer lasers. The Agency anticipates that at least some of these investigations will lead to enforcement actions, including seizure, injunction and or civil penalty.

Question. Has anyone been injured with an unapproved, illegal laser?

Answer. The Agency has received allegations of injuries, and is currently looking into these allegations.

Question. How much longer will the Agency allow the users of these illegal lasers to remain in non-compliance with FDA regulations?

Answer. The Agency has been working with the physician community to bring these users into compliance. Initially, the physicians did not have an understanding of their responsibilities under the device law, and we waited to give them time to understand and to avail themselves of the IDE or Certification process. Additionally, we were exploring and evaluating our legal authority to regulate physicians and sort out complex issues such as regulation of custom devices. At this point, the Agency believes that unapproved lasers that are not under IDE should be subject to regulatory action, and we are vigorously pursuing that end.

Question. The Food, Drug, and Cosmetic Act places a strict ban against advertising or otherwise promoting the off-label use of drugs and medical devices. I have been told that numerous physicians around the country are actively promoting unapproved laser vision correction procedures, that the Agency is aware of these advertising abuses, and in fact has in its possession copies of many of these advertisements and infomercials. Is this true, and, if so, why has the FDA not taken enforcement action against the clear violation of the prohibition on advertising or promoting unapproved procedures?

Answer. FDA has long maintained that off-label use of an approved device without advertising is within the realm of the practice of medicine and the Agency has not exercised its enforcement discretion in this area. However, the Food, Drug, and Cosmetic Act prohibits the advertising and promotion of off-label use of devices. FDA is aware that some physicians are advertising unapproved refractive procedures using excimer lasers. The Agency believes that the overriding concern from a public health perspective is the use of an unapproved laser. Thus, FDA is vigorously following up on the use of unapproved lasers.

Question. Does the Agency plan to take action, and if so, when?

Answer. We are vigorously following up on the use of unapproved lasers. When we become aware that they are in fact advertising and using an unapproved laser, the overriding issue is the use, not the advertisement, of an unapproved laser. FDA intends to take enforcement action in this area in the near future.

Question. What resources has the Agency put in place to assure that these physician IDE sites are in compliance with FDA regulations and that they receive adequate oversight to protect the public?

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Answer. Staff from FDA's Office of Compliance, Office of Device Evaluation, and Office of Regulatory Affairs are working together to assure that physician IDE sites are in compliance with FDA regulations and that they receive adequate oversight to protect the public. Actions that are being taken include inspections of sights to determine compliance. Further action will be taken against sights that are found to be out of compliance, including withdrawal of IDE's and possible seizure of the unapproved devices.

RADIOPHARMACEUTICALS

Question. Why does the FDA on average take 29.8 months to review a radiopharmaceutical NDA submission given their high level of safety as measured by the incidence rate for adverse reactions?

Answer. In the past, we had a backlog of applications for radiopharmaceutical drugs. For example, two applications in the fiscal year 1994 submission cohort were overdue when acted upon, because we were working to reduce an existing backlog including those for radiopharmaceuticals. The backlog has now been eliminated and we are now reviewing applications according to the PDUFA time frames. Regarding the effect of the safety record of radiopharmaceuticals, a historically good safety record of a broad class of drugs does not eliminate the need to thoroughly review each member of the class and ensure it is safe and effective. As our current results demonstrate, we are able to provide a thorough and careful review and still meet our PDUFA goals.

Question. Is there a reason why the review times for radiopharmaceuticals have not improved under PDUFA, even while FDA has shown improvement in the time it takes to review drugs in general?

Answer. Review times under PDUFA have improved quite dramatically for drugs in general and for radiopharmaceutical in particular. Because the FDA's focus was to eliminate the pre-PDUFA backlog before concentrating on applications filed more recently, the overdue rate for that division's 1994 submission cohort under PDUFA was 100 percent. For the 1995 submission cohort, the overdue rate for NDA's was zero—a substantial improvement which has continued in the 1996 submission cohort. The improvement is even more striking when looking at the raw numbers underlying the percentages. The 1994 cohort of new product applications consisted of two original submissions that were filed, each of which was reviewed in more time than allotted by the PDUFA goals, and one resubmission that was reviewed on time. The very next year, the 1995 cohort of applications filed included three original submissions and three resubmissions, all of which were reviewed on time or faster than the PDUFA goals. The 1996 cohort of applications that were filed is larger still. The reasons for this improvement are similar to the reasons for improvement for drugs in general: accountability, clear objectives, and concomitantly enhanced resources that were devoted to meeting those objectives. There is an additional factor contributing to improvement in approval times—the elimination of the pre-PDUFA backlog of NDA's. After completing that particular body of work, the FDA was able to turn its full attention to PDUFA applications and to meeting PDUFA goals, with the gratifying results I have just described.

Question. Is there a reason why the Division of Medical Imaging and Radiopharmaceutical Drug Products has one of the highest mean drug review times? Is the PDUFA process only working well for certain drugs?

Answer. Again, the Division of Medical Imaging and Radiopharmaceutical Drug Products had a backlog in the past, but this is no longer the case and the division is now meeting its PDUFA goals.

FOOD ADDITIVE APPROVALS

Question. To what extent has FDA looked at feasible plans for improving the food additive approval process? Have you looked at a way to provide a proprietary benefit in exchange for some type of fee?

Answer. FDA has instituted, and is continuing to implement, a variety of reforms designed to improve and streamline the food and color additive approval process. The goal of these initiatives is to set in place a strong and credible food and color additive review process that results in timely decision-making with predictable outcomes.

FDA has initiated several new approaches to the review of food ingredients that allow us to better prioritize our allocation of resources. FDA has recently proposed to adopt a streamlined notification process for substances whose use is generally recognized as safe—GRAS—to replace the current petition process by which FDA has affirmed, by rule, that the use of a food ingredient is GRAS. Substances whose use is GRAS do not require FDA approval and we expect that eliminating the peti-

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tion and rulemaking on such substances will free up critical resources for work on food additive petitions. Similarly, FDA has also proposed to exclude certain food and color additive petitions from a requirement to include an environmental assessment, saving both reviewer and petitioner effort.

In the area of approval of "indirect" additives, such as food contact substances, FDA has implemented a Threshold of Regulation Policy whereby exemptions from the need to submit a food additive petition may be granted for certain low-risk food contact substances. More than 40 exemptions have been granted by letter under this policy during the last two years for materials that would otherwise have been the subject of food additive petitions. A Special Project Team has also been established to expedite the review of other low-risk food contact materials that are not eligible for the Threshold of Regulation Policy. As a result, fewer resources have been expended.

FDA is undertaking many other management and process initiatives to improve our guidance to prospective petitioners, establish and articulate performance goals for timeliness of decision-making, ensure that our communication to petitioners is timely and unambiguous, and strengthen and better articulate filing criteria to increase the likelihood that filed petitions will be complete and adequate for timely review and regulation.

Under current statute, regulations permitting the use of new food and color additives are generic—that is, any person may manufacture or use an approved food or color additive in conformance with the conditions of use permitted by the regulation. This construct has been cited by industry groups as a disincentive to establishing a fee system for the support of approval of food additives. Several possible mechanisms to provide a proprietary benefit to petitioners have been discussed. For example, the food and color additive approval system could be constructed so that only the petitioner would have the right to market the additive for a certain period of time. Alternatively, a system incorporating "data exclusivity" could be established—that is, for a period of time, the data a petitioner uses to support a food or color additive petition could not be used by another applicant to support approval of the same additive. Any system to provide a proprietary benefit to petitioners would require amendment of the statute.

Question. Exclusive of indirect additives and Generally Recognized As Safe (GRAS) affirmation petitions, how many direct food additive petitions were approved last year? How many had been pending more than five years, and what was the average time they had been pending?

Answer. In fiscal year 1996, FDA completed action on a total of 22 direct food and color additive petitions. Of these, 13 were approvals. FDA established or amended regulations for the use of 11 direct food additives—substances intentionally added to food—as well as two color additives for food use. In the other nine cases, the petitions were either withdrawn by the petitioner or were dropped because they were inadequate for filing.

FDA has 13 petitions which have been pending for five or more years. I will provide, for the record, a table that displays the average pending time for these petitions.

[The information follows:]

Approval times: Decision cohort fiscal year 1996—Direct food additive petitions and color additive petitions pending 5 or more years

<i>Action</i>	<i>Months</i>
Initial receipt of petition to approval (average)	29
Initial receipt of petition to approval (median)	19
Range	6–99
<hr/>	
Last file ¹ to approval (average)	11
Last file ¹ to approval (median)	9
Range	6–20

¹Last file refers to the date of receipt to a petition, in reject status, of information necessary to complete the review.

Approvals for food additives and color additives are effective when an order prescribing the conditions of safe use of a food additive is published, or when an order listing a color additive is published with a specified effective date. Thus, the intervals presented in the top half of the table represent the total time from the date of receipt of a fileable petition to the date of publication of a regulation. In many cases, during the review of a petition, deficiencies in the data supporting the safe use of the additive are identified; in such case, the petitioner is notified and given the opportunity to amend the petition to provide the necessary information. FDA

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does not have data on how much of the total time from receipt to approval is "FDA time" and how much is "petitioner time." However, we do have information pertaining to the interval between the date of "last filing" (i.e., the date of receipt, to a petition in "reject status" of the information necessary to complete review of the petition) and the date of publication of a regulation.

Question. How many direct food additive petitions were submitted last year?

Answer. In fiscal year 1996, FDA received six petitions to establish or amend regulations for the use of direct food additives.

Question. How did you arrive at the figures \$12 million for food additives approvals, and \$19 million for post-market surveillance?

Answer. FDA's budget must also be looked at in the context of the overall plan the President has proposed for a balanced budget by fiscal year 2002. New and expanded user fees have been proposed across the Federal Government. The President's budget identifies by program area and dollar amount where fees could be derived. This provides a more substantial basis from which to develop reasonable and achievable user fees for fiscal year 1998, with input from both Congress and the affected regulated industries. We looked across the board at FDA activities to determine which would be most appropriate for user fees. Any specifics by activity area to be covered by user fees serves as a useful starting point for any upcoming negotiations on the proposed user fees among FDA, Congress, and the affected industries.

Proposals under the Foods program include: premarket approval activities for food and color additive petitions submitted pursuant to certain sections of the Food, Drug and Cosmetic Act—FD&C Act—of \$12,543, and partial funding of postmarket regulatory activities of \$19,024, as covered by section 704 of the FD&C Act. User fees are proposed to cover essentially all of the costs of the premarket review of petitions.

In general, postmarketing regulatory activities include not only traditional domestic postmarketing activities but also emerging strategies. These include partnering with state, local, professional and industry groups and individuals, to enhance the quality and safety of products. In addition, by increasing information sharing and technical assistance so that establishments are operating with strong quality assurance systems, the Agency anticipates that less formal regulatory intervention may be required. Traditional domestic postmarketing activities such as inspections, investigations, sample collections and analyses, regulatory analytical methods development, field exams, recall effectiveness checks, and injunctions and seizures will continue to play a role in postmarketing regulation.

Postmarketing fees are based on the Agency's Official Establishment Inventory, or OEI, and would be used to offset a portion of FDA's postmarket activity expenses. For postmarket regulatory activity fees we have determined a fee of about \$550 per establishment, which would be applied to the 35,369 Food and Cosmetics Establishments listed in the OEI. Any establishment fees would be collected at the beginning of the fiscal year.

Question. Last year, to address the severe backlog of additives, money and personnel were temporarily transferred to the Center for Food Safety and Applied Nutrition (CFSAN). What is the status of these additional resources? When is this commitment scheduled to end? What will this mean for CFSAN when future additional resources are no longer available?

Answer. Review of food additive petitions is a high priority for the Agency. FDA is committed to reforms that will permit the Agency to achieve its goals of health protection, timeliness, and accountability in the long-term.

In fiscal year 1996, CFSAN temporarily reassigned 23 FTE to petition review activities in an effort to reduce the current inventory of pending food additive petitions. Final decisions were made on approximately 30 more petitions than were received during the year and the cohort of 295 petitions reported to Congress in June of 1995 was reduced by more than 100 petitions by the end of fiscal year 1996. Great progress was made; however, much work still remains. In response, CFSAN permanently reassigned eight of those individuals to petition review activities and has continued to utilize temporary reassignments as a means of providing additional resources to food additive petition review activities. The remainder of the original individuals temporarily reassigned returned to their permanent job assignments; seven of these are committed to work on food additive petitions part-time or on special petition-related projects. Temporary reassignments of 14 other individuals from other programs in the Center have been made in fiscal year 1997. It is expected that such temporary reassignments will continue in order to accomplish the goals of reducing the inventory of pending petitions and eliminating overdue petitions.

FDA provided funds for two major contracts to assist in petition review. One is for the review of toxicology studies contained in petitions and the other is to review

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study packages from indirect additive petitions. These contracts extend for three years and are intended to reduce the inventory of data awaiting scientific review. This will allow FDA scientists to focus on new petitions as they come in rather than setting them aside to await completion of work on earlier petitions. Contracts were also awarded to document petition review resource needs, to assist in developing a higher threshold of filing, to advise FDA on alternative safety decision models, and to conduct petitioner workshops annually. These contracts will result in a more efficient process—one where less time is spent in reviewing and correcting inadequate petitions and where new decision strategies will be available after a petition is received.

Funds were also provided to upgrade the information management capabilities available to the food additive program. When fully implemented, the new resources will aid in the searching, retrieval, and review of data in food additive petitions, and will markedly enhance document management. The work required to install, test, and implement these resources is ongoing and is on schedule. FDA is committed to reforms that will permit the Agency to achieve its goals of timeliness, accountability and predictability in the review of petitions over the long-term.

QUESTIONS SUBMITTED BY SENATOR SPECTER

METHADONE REGULATIONS

Question. Methadone has been used for over 30 years as a treatment for heroin addiction. Is methadone safe to use?

Answer. FDA has approved methadone as a narcotic analgesic and for the detoxification and maintenance treatment of narcotic dependence. Methadone is safe under the conditions set forth in the product labeling, and for the treatment of narcotic dependence, in the regulations set forth under 21 CFR § 291.505.

Question. Is methadone effective in treatment of heroin addiction?

Answer. FDA has determined that methadone is effective for the detoxification and maintenance treatment of opioid addiction.

Question. What is the justification of the FDA for regulating methadone differently than all other drugs?

Answer. As a narcotic intended for the treatment of narcotic dependence, methadone falls under the Comprehensive Drug Abuse Prevention and Control Act of 1970, CDAPCA, Public Law 91-513, and the Narcotic Addict Treatment Act of 1974, NATA, 21 U.S.C. § 823(g). These statutes require the Secretary to consult with organizations and the Attorney General to determine the appropriate methods for medically treating narcotic addiction and to develop standards to determine whether practitioners are qualified to provide narcotic treatment. In addition, the NATA requires the Secretary to determine that narcotic treatment providers will comply with standards that address the medical use of narcotic drugs, including standards for providing narcotic drugs for unsupervised use by individuals enrolled in a treatment program. FDA, in conjunction with the National Institute on Drug Abuse, has carried out the Department's responsibilities by enforcing process oriented regulations. FDA is proposing to switch to an oversight system that relies on accreditation to fulfill the Department's obligations in this area.

Question. What is your view in regard to the conclusions of the Institute of Medicine Report from 1995 on the Federal Regulation of methadone treatment that concludes "the risks to the public safety and the public health of diverted methadone do not outweigh the benefits of making methadone treatment more readily available."?

Answer. FDA is aware of the risks to the public health associated with the diversion of methadone. The current regulations include extensive requirements, limitations, and conditions on providing methadone to patients for unsupervised use. What is not obvious, however, is the extent to which the risks associated with diversion affect the availability of methadone treatment. Indeed, the Institute of Medicine, or IOM report noted that there are many factors affecting the availability of treatment, including financial factors, community resistance to new or expanded programs, and others. In addition, in several instances, the report stressed the need for quality treatment, noting that no treatment is preferable to poor treatment.

The IOM report included many recommendations for changes to the existing regulations. Included were recommendations directed at the relaxation, or elimination, of most of the regulatory requirements governing the provision of methadone for unsupervised use. The IOM was careful to caution that a contingency should be available in case a public health crisis resulted from recommended changes.

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FDA is actively considering the IOM Report recommendations, including diversion control recommendations, as it continues to evaluate changes to the regulatory oversight system for methadone treatment.

DRUG APPROVALS

Question. As you know, the President's budget proposal would redirect a portion of the prescription drug user fees to general revenue. To what extent would this proposal, if enacted, negatively impact the ability of the FDA to complete drug approvals on a timely basis?

Answer. We are not aware of any proposal to redirect prescription drug user fees to general revenue. Under the current legislation, FDA deposits PDUFA collections into an FDA account at the Department of the Treasury, and these resources are available to the Agency when apportioned by the Office of Management and Budget. We do not anticipate any change in this current practice and therefore do not foresee any effect on our ability to complete drug approvals on a timely basis.

Question. How is the FDA streamlining the process for obtaining emergency Investigational New Drug approvals so terminal patients may receive immediate treatment in dire situations?

Answer. FDA currently has a regulation specifically intended to expedite obtaining an investigational drug for emergency use where the situation does not allow time for submission of an IND. Generally, the process works well. In most cases, FDA's review of a practitioner's request for 21 C.F.R. § 312.36 use of an investigational drug in an emergency situation and FDA's authorization to the manufacturer to ship the drug for that use can be accomplished over the telephone or by FAX within a matter of hours. It should be noted that an emergency IND can only be granted to a licensed physician and not to an individual patient or manufacturer.

Notwithstanding the success of this program, FDA is looking at ways to provide more consistent application of evaluation criteria and procedures across reviewing divisions and is considering whether to propose regulations to clarify the types of treatment uses that can be authorized under emergency IND's and the criteria for their authorization. However, there are certain circumstances that can affect whether a drug may be made available under an IND for emergency use. If a manufacturer of a drug does not want to ship the drug for such use, FDA does not have the authority to require such shipment. If supplies of the drug are low, such as in the situation where clinical trials are being done with a lottery, the sponsor must decide whether making the drug available under an emergency IND could jeopardize the conduct of the ongoing trial. In all cases, even for emergency IND's, local Internal Review Board oversight is required.

INSPECTION OF IMPORTED MUSHROOMS

Question. I have been informed that the FDA and the State Administration of Import and Export Commodity Inspection of China (SAC) held a meeting in January of this year regarding the current automatic detention order in effect for imports of canned mushrooms from China. During that meeting, I understand that FDA discussed sending an observation team to China. Has a trip to China been scheduled? Does FDA have any plans to lift the automatic detention or change the lot by lot release program?

Answer. A meeting was held on January 14, 1997, between representatives of FDA and the State Administration of Import and Export Commodity Inspection—SACI—of the Peoples' Republic of China, or PRC. FDA's imposition of countrywide detention without physical examination of canned mushrooms from PRC, due to the presence of Staphylococcal enterotoxin—SET—was one of several items discussed. PRC representatives indicated their concern with the FDA program, since there had been a very low incidence of SET contamination of Chinese mushrooms in the eight-year history of the program. The PRC representatives also provided a summary of the improvements made by the Chinese mushroom industry since 1989 and their government's oversight of production and export.

FDA representatives informed SACI that the Agency still awaits the information from PRC which was requested during a July 1996 meeting in order to perform a thorough review of processing, shipment, and Chinese government's oversight. FDA indicated that once this information is received and reviewed, the Agency will determine whether a technical, policy team should be sent to PRC to observe and evaluate the current situation. To date, FDA has received some of the requested information, which is now under review. FDA has also indicated that it is amenable to scheduling a visit to PRC in the fall of 1997 and requested a letter of invitation from SACI. However, pending the receipt of the remainder of the requested information,

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results of the information review, and an assessment of available agency resources, no FDA trip to PRC has been scheduled to date.

Pending FDA's evaluation of the technical and regulatory information provided by PRC, and verification that there has been satisfactory resolution of the problems that resulted in the country-wide detention without physical examination of canned mushrooms from PRC, FDA would consider appropriate modifications to the current lot-by-lot release program, and the necessity for country-wide detention without physical examination of canned mushrooms from PRC. Currently, FDA has no immediate plans to lift or change the lot-by-lot release program.

Question. During 1996, were there any detentions or seizures of imported canned mushrooms? If so, please provide the Subcommittee with the details of each.

Answer. In fiscal year 1996 there were no seizures of imported canned mushrooms from PRC for violations involving the presence of SET. In addition, no shipments of product offered for entry under the lot-by-lot program were refused entry.

QUESTIONS SUBMITTED BY SENATOR MCCONNELL

RECENT COURT RULING AND FDA RESOURCES

Question. Last week, a United States District Court Judge ruled that FDA lacks the statutory authority to regulate tobacco advertising and promotion. The judge also stayed—or put a hold on—all of the FDA's rules except for the minimum age rule and the rule requiring retailers to card anyone who is younger than 27 years old.

Dr. Friedman, under the Synar Amendment, every state in the union already is taking steps to increase its enforcement of its own minimum age laws. Given these factors, does it make sense for FDA to continue to expend resources on its tobacco rules, especially when the only rules in effect duplicate ongoing state efforts?

Answer. There is a substantial difference between the provisions of the Synar Amendment and the FDA tobacco regulations. The Synar Amendment requires that, in order for State Substance Abuse Agencies to receive federal block grants, States must enact and enforce legislation prohibiting the sale of tobacco products to minors. Although all States currently have such laws, their enforcement varies dramatically, because block grant dollars cannot be used for such enforcement efforts. In contrast, the FDA regulation establishes mandatory conditions on the sale and distribution of tobacco products that apply to manufacturers, distributors, and retailers of tobacco products. FDA's regulation is enforceable through fines and other means for non-compliance. The funds FDA has requested are for enforcement activities to achieve compliance with the requirements of its regulation. Thus, the funds requested by FDA are to be used for a different purpose than those for the SAPT Block Grant related to Synar.

FDA believes that enforcement of its regulations is essential if there is to be a reduction in the premature death and disease that result from the use of cigarettes and smokeless tobacco. The problems associated with nicotine addiction are so substantial, in fact, that it will take the concerted efforts of everyone interested in improving and protecting the health of children and adolescents to achieve the Administration's goal of reducing the number of young people who use cigarettes and smokeless tobacco by 50 percent over the next seven years.

Question. For the record, please provide a revised estimate of the resources (in dollars and FTE's) the FDA believes would be necessary to implement the tobacco rules that have not been stayed by the United States District Court.

Answer. The Administration is still requesting the full \$34 million for the tobacco initiative. The bulk of the money requested for fiscal year 1998 is for state contracts to enforce the February 28 provisions upheld by the court. Only a small portion—between \$1 to \$2 million—of the planned outreach activities would have been devoted to the advertising provisions overturned by the court. Those dollars will be re-allocated to outreach for the access provisions already in effect.

FDA'S PLAN IS REDUNDANT WITH STATE EFFORTS TO ENFORCE TOBACCO MINIMUM AGE LAWS

Question. Under the Synar Amendment, a state risks losing federal funding if it is not adequately enforcing its own tobacco minimum-age laws. Please explain how the FDA's rules that took effect on February 28, 1997 are not duplicative of state minimum age laws already being enforced by state officials?

Answer. The FDA rule complements all ongoing activities at the state and local level aimed at reducing young people's use of tobacco. Despite that fact that all states have minimum age laws for the sale of tobacco, the incidence of young peo-

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ple's use of tobacco is rising dramatically. Among 8th graders, the rate has climbed 50 percent in the last six years. A coordinated effort between federal, state, and local governments is essential to reduce the number of young people that use tobacco products.

Question. Dr. Friedman, in FDA's April 23rd letter to me, FDA indicated that the Substance Abuse and Mental Health Services Administration has informed the FDA that "all 50 States currently have laws prohibiting tobacco sales to minors and that all States have submitted their inspection methodologies and sampling designs" to HHS. Does FDA have any indication that the states are not adequately enforcing their minimum age laws under the Synar Amendment?

Answer. According to SAMSHA, although all states have submitted their block grant applications to SAMHSA describing their enforcement efforts, not all applications have been reviewed by SAMHSA. Preliminary results show that although states have begun enforcing their laws, the level of enforcement varies from state to state.

Question. In the final rule implementing the Synar Amendment, HHS indicated that states could use certain federal block grant funds toward their retail inspection costs. Why is FDA requesting additional expenditures to do a job that the states are already performing with the aid of existing federal block grants?

Answer. There is a substantial difference between the provisions of the Synar Amendment and the FDA tobacco regulations. The Synar Amendment requires that, in order for State Substance Abuse Agencies to receive federal block grants, States must enact and enforce legislation prohibiting the sale of tobacco products to minors. Although all States currently have such laws, their enforcement varies dramatically, because block grant dollars cannot be used for such enforcement efforts. In contrast, the FDA regulation establishes mandatory conditions on the sale and distribution of tobacco products that apply to manufacturers, distributors, and retailers of tobacco products. FDA's regulation is enforceable through fines and other means for non-compliance. The funds FDA has requested are for enforcement activities to achieve compliance with the requirements of its regulation. Thus, the funds requested by FDA are to be used for a different purpose than those for the SAPT Block Grant related to Synar.

Question. FDA indicates its plan to "commission" state and local officials to help enforce its tobacco rules. FDA also indicated in its April 23rd letter to me that it does not "necessarily" plan to commission only those state and local officials already responsible for enforcing the state's own minimum age laws. Please explain why it would be necessary for FDA to enforce its federal minimum age rules by funding state officials other than those state officials currently responsible for enforcing the State's own minimum age laws.

Answer. FDA is relying on the states to identify the appropriate state agencies who will be contacted for contracting with the federal government. It is possible that a state may identify an agency other than the one currently responsible for enforcing the state's own minimum age law.

FDA'S TOBACCO PLAN DUPLICATES EFFORTS

Question. FDA indicates that it wants to work with CDC to develop a national survey of young people to determine, among other things, the prevalence of tobacco usage and illegal purchase rates by minors. Aren't such efforts duplicative in that state reports required under the Synar Amendment are required to indicate illegal purchase rates?

Answer. No, these are not duplicative efforts. We are meeting and working with both SAMHSA and CDC on this issue. SAMHSA, for purposes of administering the Synar rule, is monitoring State inspection activities and results. SAMHSA is not monitoring teen tobacco use rates.

Meanwhile, FDA is working with CDC to refine their existing national survey of young people, to determine, among other things, the prevalence of tobacco usage and illegal purchase rates by minors.

Question. FDA says that it wants to work with states to develop comprehensive-tobacco-control demonstration projects. Don't the Centers for Disease Control and Prevention and the National Cancer Institute already provide millions of dollars to the states through the IMPACT and ASSIST programs to help states develop comprehensive tobacco control programs?

Answer. Enforcement of the FDA rule at the state and local level is intended to complement all ongoing tobacco control activities including those efforts underway under the auspices of IMPACT and ASSIST. FDA is working and meeting with CDC and NIH to coordinate efforts.

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FDA SHOULD ALLOCATE ITS AVAILABLE RESOURCES TO PRODUCT REVIEW FUNCTIONS

Question. In the last Congress, this Committee repeatedly encouraged FDA to re-allocate its resources in order to meet its statutory deadlines for the review of various product applications. If FDA was able to find \$34 million in its fiscal year 1998 request for its tobacco rules, why hasn't FDA been able to find additional resources for product review functions?

Answer. Improving the safety of the food supply and keeping tobacco out of the hands of children are both initiatives of the utmost importance and are very high priorities for FDA and this Administration. While FDA's traditional activities in promoting and protecting the public health through product review functions are of vital importance, the Administration's budget for FDA should be viewed in total, keeping in mind that it fits in with the President's plan for an overall balanced budget by fiscal year 2002.

Question. From what functions did FDA take the \$34 million?

Answer. The Administration's fiscal year 1998 budget for FDA includes adequate funding to maintain our current level of activities in our traditional areas of concern, as well as provides additional funding for two important and high priority initiatives that correspond with FDA's mission of protecting and promoting the public health—reducing the incidence of death and illness associated with foodborne pathogens through the Food Safety Initiative, and reducing the availability and appeal of nicotine-containing tobacco products to children.

PRESCRIPTION DRUG USER FEE ACT (PDUFA)

Question. Dr. Friedman, during the House Commerce Committee hearing you stated that FDA's base budget is not stable and this factor could put PDUFA at risk of failure. If I recall correctly, user fees under PDUFA can only be collected if appropriations for human drug application review reach the level provided in fiscal year 1992 for such costs multiplied by an adjustment factor. In your statement before Commerce Committee, were you referring to the PDUFA I definition of a base budget? If not, please define what a stable base fund for FDA is measured by, and what level of funding is required?

Answer. Yes, Senator you are correct. PDUFA I was intended to finance increases in the costs of the process to review new human drug applications. Performance goals were established contingent to the resources provided by user fees in addition to base appropriations calculated by the level of FDA funding in fiscal year 1992 multiplied by an adjustment factor.

Question. Did you make the President aware of the potential consequences that an eight percent reduction in FDA budget authority could have on the agency in light of the fact that no additional user fees are authorized?

Answer. During the President's Budget development many proposals were discussed fully. These fees are a part of a government-wide policy to establish user fees. These user fees—tied to performance measures in maintaining important government functions—are a key component to achieving a balanced budget by the year 2002.

Question. Do you recommend authorization of the President's proposed user fees as part of the PDUFA II reauthorization or in separate legislation?

Answer. PDUFA has been a very successful program, facilitating the availability of important new therapies to the public sooner than they otherwise would have been available, and without sacrificing the assurance of safety and effectiveness of these products. Obviously the reauthorization of this program is a priority for the Agency and its primary beneficiary, the public. Discussions with industry representatives on PDUFA II have been productive in identifying several areas where the overall process can be improved, including development time. We would recommend reauthorization of this program either as separate legislation or as part of the larger bill as proposed by the Administration.

Question. FDA's fiscal year 1998 budget proposal states that the agency intended to implement the new user fees, which supplant appropriated resources, with performance measures and goals. In addition, FDA stated it "will work with its many constituencies, including the regulated industry, to develop appropriate performance goals." If FDA finds merit in setting performance measures and goals for its obligations in food, devices, generics, animal drugs, and over-the-counter drugs, why hasn't FDA pursued these to date?

Answer. FDA has always measured its performance. The fiscal year 1998 President's budget, with its inclusion of new user fees, provided an excellent opportunity to tie our request with performance measures and goals, as we prepare for a performance-based budget for fiscal year 1999, as required by the Government Performance Results Act.

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Question. Why has future progress on these accountability initiatives been staked to the implementation of substitution user fees?

Answer. The performance measures described relate to the availability of resources at the total levels indicated for each program, whether those resources are from a combination of budget authority and user fees or all budget authority. However, the proposal for new user fees provided FDA with an opportunity to tie our budget request to performance measures, as required by the Government Performance Results Act, or GPRA. The fiscal year 1999 budget will be the first under full coverage of GPRA, and will reflect progress on performance goals and measures.

Question. I have noted with interest the FDA's response to my questions from the FDA hearing before the Senate Labor and Human Resources states that "it is appropriate that the regulated industries contribute a share of FDA's cost of ensuring the safety and effectiveness of their products." Second, the FDA's budget states that the FDA supports the development of "appropriate performance goals to ensure" that user fees "will be used to finance and enhance program activities." Appropriate is a vague, relative term, Dr. Friedman. Are members of this subcommittee to conclude that FDA means that it is "appropriate" for PDUFA to provide additive funds while any new user fees substitute appropriated funds?

Answer. The President's fiscal year 1998 request includes a variety of different user fees as part of FDA's budget, and in the overall context of a balanced budget by the year 2002. User fees in need of reauthorization—the Prescription Drug User Fee Act and the Mammography Quality Standards Act—are additive. To meet the requirements of a balanced budget by fiscal year 2002, the President's budget also includes proposals for a number of new user fees which are not additive to existing resources, but substitute for appropriated funds, as a way to reduce the deficit. In either case, FDA remains committed to developing performance goals that reflect the level of resources anticipated.

Question. Relative to performance goals, how do "appropriate" performance goals differ from what FDA does now?

Answer. FDA has been working to develop additional performance measures as well as working to fine tune its current performance measures that will accurately reflect the important work done by the Agency in our core activities of premarket review and postmarket assurance. This work has been driven by the statutory requirement for a performance-based budget for fiscal year 1999, stipulated by the Government Performance Results Act.

FDA is making progress in defining results-oriented performance measures through a vehicle which we are defining as "process improvement" goals. These are goals that position the Agency to be better able to strive toward outcome goals such as reduction in product hazards. Process improvement goals can be one of two types, as illustrated in connection with our request for additional funding for the Food Safety Initiative.

First are those that reinvent programs to be better able to produce outcomes. An example of this type of goal might be to establish a collaborative arrangement with states, and the regulated industry, so the appropriate persons are working together to produce results that these institutions working alone are not able to accomplish. An example of this would be the Agency's seafood initiative in which FDA, the States, and the regulated industry work together to establish an industry managed quality control system which will position the industry to produce consistently high quality and safe seafood products. The HACCP system—Hazard Analysis Critical Control Points—is an illustration of a reinvention performance goal that will make major differences in the safety of seafood to the U.S. consumer.

Second are those that establish a capability to measure and track outcomes. Examples of such process improvement goals include the establishment of a seafood data base which will collect information on product hazard information. Another example would be the Agency's work with other Federal regulators to establish a Sentinel System which collects microbiological data on foods, and which will enhance the government's capability of tracking food safety outcomes that will be of interest to Congress and the public.

The challenges to such endeavors include the expense associated with establishing such systems and institutional arrangements, the continuing uncertainty that causal links can ever be established between Agency efforts and desirable end outcomes, and the usual cultural resistance of moving from traditional organizational arrangements and measures that require reliance on influence rather than control to produce desired effects.

Question. Dr. Friedman, you've expressed repeated concerns that without at least level funding with fiscal year 1997, the FDA will not be able to perform its statutory duties to protect the public's health and safety. Third party review has generated much attention in recent years as a means to reduce the time necessary for evaluat-

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ing safety and efficacy and to reduce resource demands on the FDA. How could third party review entities alleviate FDA's budget constraints?

Answer. FDA is exploring this mechanism, but the concept of third party reviews is problematic for several reasons. First, FDA's scientific and clinical experts are charged with exercising independent and unbiased judgment. They comply with stringent financial disclosure and conflict-of-interest requirements designed to protect the decision-making process against bias. It is not clear how or whether this independence can be maintained with the private sector, particularly since the sponsor gets to choose the private party and repeat business may depend on the sponsor's satisfaction with the private party's decision.

Second, FDA's reviewers have extensive knowledge about all of the similar products that are made by different companies around the country. When a reviewer looks at all of the drugs for arthritis and other inflammatory diseases, or all of the heart valves, what that reviewer learns from each review increases his/her understanding of that group of drugs or devices and their effect on the body. As a result, FDA reviewers see problems that reviewers with less information may not see.

The third problem with privatization is the lack of continuity. Third party reviewers may have little knowledge of the specific development process for the product and/or of the development agreements made during the process.

FDA believes that contracting out product review to third parties should be done only if there is evidence that it can be done without jeopardizing the public health. FDA has been working on a pilot program to determine whether third parties can accomplish the goal of getting safe and effective products to the American public.

Question. Dr. Friedman, FDA provided an incomplete answer to my question regarding FDA's plan to respond to industry members who request proof that a dollar in new user fees pays for a dollar in review work within their specified account. FDA's letter notes that PDUFA is independently audited and these funds are meticulously accounted for. I commend the agency on its careful attention to the concerns of drug companies. However, does the FDA believe that PDUFA accounting methods should be used for future user fee proposals?

Answer. FDA believes that funds received for specific activities should be used only for those activities. FDA has experience under the Prescription Drug User Fee Act, or PDUFA, and the Mammography Quality Standards Act, or MQSA, of assuring the use of any fees collected to fund specific activities. FDA is committed to continuing this practice. Let me assure you that any fees collected under legislative authority that requires such fees to be used for specific programs or activities will be used for the program areas so designated. Further, as we continue discussions with Congress and industry on the proposed user fees, we would be amenable to including this particular point as part of those discussions.

Question. Would the FDA object to the consistent use of PDUFA accounting methods throughout the agency? If so, what problems does FDA foresee in such a system?

Answer. Providing for appropriate financial management procedures and controls for the review process of Human Drug Applications, as required by PDUFA, presented a number of challenges to FDA financial and program managers. This is primarily because the Act created a definition for the process which included a unique subset of activities to be included, and specifically excluded other functions of the offices involved in the process for which user fees could not be allocated. To begin with, FDA first had to examine and amplify the definition of what is included in the process and what is excluded from it. In doing this, we found that none of FDA's accounting cost centers, in their entirety, could be included in this definition. This required an extra level of time reporting, in order to meet the unique requirements. Pieces of each had to be excluded, because of specific exclusions in the new statutory definition, and in the legislative history.

Since these inclusions and exclusions defined a totally new subset of FDA activities, it was necessary to develop and implement a methodology that would allow the agency retrospectively to capture the fiscal year 1992 costs from the "base year" for the newly defined "Process for the Review of Human Drug Applications" and allow that same methodology design to be used for future year cost management and calculations.

Costs are accumulated using a variety of methods including time reporting, management surveys, and detailed interviews which are specifically tailored to meet the requirements of PDUFA. In essence, the procedural methods FDA utilizes for PDUFA are an overlay and in addition to FDA's core accounting system to meet a unique set of needs. While these techniques are very reasonable to apply for PDUFA, they do add to our financial management costs and may be unnecessarily burdensome to be implemented throughout FDA for existing needs. However, if FDA were to implement new user fee programs, such as those proposed in the fiscal year

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1998 budget, with a defined subset of activities, it is likely that many of the same methodologies for the allocation and control of costs would be employed by the Agency.

FDA—FTE

Question. Dr. Friedman, can you provide information on the number of full-time equivalent positions that have been supported exclusively by user fees to date and the projected number of FTE's that would be funded by user fees under the fiscal year 1998 budget?

Answer. During fiscal year 1996 the Agency financed 600 FTE with collections authorized by PDUFA. The Agency expects to continue at least this level of FTE in 1997 and 1998, and possibly more if application workload and accompanying fees continue to increase. For MQSA, FDA financed 43 FTE's, and estimates 35 for both fiscal years 1997 and 1998. For the new user fees proposed in the Administration's budget, 1,120 FTE's would be financed.

Question. Dr. Friedman, during the House Agriculture Appropriations Subcommittee hearing, you stated that each year FDA experiences a 2.5 percent reduction in FTE's, and that the FDA is prepared to absorb the cost of inflation through efficiencies. Can you describe those efficiencies for this subcommittee?

Answer. Our budget has been roughly flat in recent years. As a result, FDA's budget has actually declined in real terms due to increased inflationary costs for pay and benefits, and other operating expenses. Even with this absorption, FDA is committed to making the government work better and continues to be active in response to the efforts of the National Performance Review, NPR, and the HHS streamlining initiatives, and its own reviews to support its own streamlining and reinvention efforts. To meet these inflationary costs, we have initiated specific streamlining and reinvention initiatives.

Building on our central mission to promote and protect the public health, we have embarked in the past year on five far-reaching reinvention initiatives: reforming drug and medical device regulation; overhauling regulation of drugs made from biotechnology; streamlining food safety regulations; reinventing animal drugs; and increasing the availability of new cancer therapies. When fully implemented it is expected that these reinvention initiatives could save industry millions of dollars, and help FDA attain its streamlining goals, while investing agency resources in its core mission to promote and protect the health of the American people.

The Agency is continuing with the Reinventing Administrative Management Program, or RAMP, designed to gain further efficiencies in administrative and management systems. Several RAMP initiatives have helped by reducing the number of reviews and redundant steps in administrative processes and more will follow.

The Streamlining Administrative Management project encourages senior management officials to redelegate administrative authorities to as low a level within their organizations as they consider appropriate.

In other streamlining efforts, FDA analyzed supervisory ratios and spans of control agency-wide and initiated programs focusing on eliminating redundant and unnecessary steps and on reducing internal management controls. One such initiative is that over 100 policies addressing principles and procedures to enhance committee integrity and accountability were streamlined which eliminated bottlenecks in the process and greatly reduced the amount of time and paperwork. We reengineered the process for obtaining and reviewing financial disclosure forms, thus reducing the time required to complete the forms from 3 hours to 15 minutes. We reduced, from three levels to one, the number of approvals required to clear conflict of interest waivers for government employees serving on advisory committees. We implemented an Administrative Quality Assurance Program in compliance with the Federal Managers Financial Integrity Act. This program, a combined effort of headquarters and field offices, is designed to assess the management controls and programmatic requirements within selected administrative field components and make improvements. Thus far, the program has replaced three existing review programs, improved the follow-up on findings, and reduced travel time and checklists.

GPRA has also played a large role in the reinvention process. FDA implemented a broad-based training initiative to enhance manager preparation for incorporation of performance measures as an integral part of planning and managing their programs. To date, over 400 agency managers have received hands-on training in performance measurement techniques through the GPRA pilot and training efforts. The combination of FDA's reinvention and streamlining initiatives will enable the Agency to position itself for the 21st century and manage more efficiently while carrying out its mission of protecting the public health.

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Question. Do I understand correctly that such efficiencies will save 3 percent of the FDA's annual budget?

Answer. No, but these actions should help us absorb the roughly three percent in anticipated inflationary costs for fiscal year 1998 for which we did not receive additional appropriations.

Question. Are these accounted for in the fiscal year 1998 budget?

Answer. Yes. The President's fiscal year 1998 budget request, taken in total, would provide FDA the resources necessary to undertake our core activities of pre-market approval and postmarket assurance as we fulfill our mission of promoting and protecting the public health.

Question. If so, do the savings apply to the total budget, Salaries & Expenses, certain activities such as generics review?

Answer. Our ability to absorb inflation costs through increased efficiencies would apply across all FDA programs.

Question. If not, why are they absent?

Answer. The President's fiscal year 1998 budget request, would provide FDA the resources necessary to undertake our core activities of premarket approval and postmarket assurance.

Question. I note with interest that the FDA budget justification lists 329 FTE's as dedicated to Generic Drug Evaluation. Am I wrong in my understanding that the Office of Generic Drugs has a 126 FTE ceiling?

Answer. The Office of Generic Drugs has a 125 FTE ceiling.

Question. Can you explain the 200 FTE discrepancy?

Answer. The total number of FTE in the Agency allocated to the generic drug review process is 329. Of these, 125 represent the ceiling for the Office of Generic Drugs, Center for Drug Evaluation and Research, or CDER. Their primary mission is to review and evaluate Abbreviated New Drug Applications and Abbreviated Antibiotic Drug Applications, establish bioequivalence specifications for drug products, and develop guidelines for bioequivalence reviews. An additional 90 FTE located in other CDER organizations also contribute to the generic drug review process. These individuals include additional reviewers, regulatory staff, information technology support staff and other support staff. The remaining 114 FTE provide inspectional support in the Office of Regulatory Affairs.

SHIFTING OF RESOURCES TO USER FEES SUPPORTED ACTIVITIES

Question. When questioned about deficiencies in performance, the FDA points to a lack of adequate resources. Dr. Friedman, it appears to me that FDA's management of resources is also a critical component in the performance equation.

I note with interest that the FDA budget justification lists 329 FTE's as dedicated to Generic Drug Evaluation. Am I wrong in my understanding that the Office of Generic Drugs has a 126 FTE ceiling? Can you explain the 200 FTE discrepancy?

Dr. Friedman, several questions recently raised in the media focused on FDA's practice of shifting assigned resources to other activities. For example, the FDA has consistently told the generic drug industry that the reason why generic drug reviews take so long is because the agency lacks the resources needed to hire more reviewers. Yet press reports indicate that the fundamental reason generic drug reviews take so long is because FDA is shifting resources out of the Office of Generic Drugs in order to meet the PDUFA goals for new drug approvals. In addition, an FDA official testified that the reason food additive petition reviews were so long was due in FDA's focus on meeting PDUFA goals at a recent hearing before the House Subcommittee on Government Reform and Oversight.

In contrast, I understand House Commerce Oversight and Investigations Subcommittee Chairman Joe Barton expressed grave concerns regarding the possible use of PDUFA funds for other FDA activities.

Dr. Friedman, I know you share my concern that this subcommittee faces difficult decisions regarding funding allocations. Reliable data and budgeting are paramount in assuring member confidence that every dollar of approved funding goes to the function that this subcommittee assigns. Please clarify to this subcommittee FDA's response to these reports of resource "borrowing." What resource reporting methods would provide this subcommittee with the necessary information to evaluate the accuracy and legitimacy of questions regarding resource "borrowing."

Answer. The issue involves protection of certain activities from reductions to which other activities are subject. Under PDUFA, fees can only be collected and made available to cover increases in the costs for the process to review human drug applications over and above a base level of appropriated resources, as provided in the Federal Food, Drug and Cosmetic Act, in section 736 (g)(2)(B). This provision of the PDUFA legislation along with the requirement to apply an adjustment factor

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calculation, defined in section 735 (8) of the FD&C Act, to the fiscal year 1992 base level of appropriated funding for the process, was enacted to ensure that user fees collected under PDUFA are indeed additive resources for the review of human drug applications. In the straight-lined budget environment to which FDA has been subject for the past several years, when a significant portion of base appropriated resources must remain stable or increase, other activities must take a higher proportion reduction to absorb increased inflation costs.

FDA PRIORITIES

Question. FDA's fiscal year 1998 budget request proposes about \$244 million in regulatory fees to be paid by the industries it regulates. The request also included \$58 million for new agency initiatives. Specifically, FDA requests \$24 million to implement the President's "Food Safety Initiative" and \$34 million to implement the FDA regulation prohibiting advertising of tobacco products to children. FDA consistently fails to meet its statutory deadlines for review of food, drug, and medical device applications and petitions and claims that the agency is unable to meet these deadlines because it lacks the necessary resources. Dr. Friedman, on average, your agency fails to meet its statutory deadlines to review petitions and applications for foods, drugs, and medical devices. You claim that FDA lacks the resources necessary to meet these statutory duties. Yet, FDA proposes two new spending initiatives totaling \$58 million. All of this comes in a year when discretionary monies are tighter than ever. Let me ask you about the priority setting issue this Committee will probably face. Should existing FDA activities be cut to fund new spending initiatives or is maintenance of existing agency activities a priority over new spending initiatives?

Answer. The Administration's budget for FDA should be viewed in total, keeping in mind that it fits in with the President's overall balanced budget plan by fiscal year 2002. I am unable, at this time, to prioritize among the new funding included in the budget versus our traditional areas of concern. Improving the safety of the food supply and keeping tobacco out of the hands of children are both initiatives of the utmost importance and are very high priorities for FDA and this Administration. However, FDA's traditional activities in promoting and protecting the public health through premarket review and postmarket assurance are also of vital importance.

FDA has made strides in improving performance its many programs. For human drugs and biologics, we have consistently succeeded in meeting and even exceeding all performance measures established in the Prescription Drug User Fee Act, or PDUFA.

But even in areas where we did not receive additional resources, we continue to make progress. In medical devices we have improved premarket approval reviews, or PMA's, while maintaining review times for abbreviated applications—the 510(k)'s. This latter category of applications—which accounts for the vast majority of all device submissions—covers devices that are substantially equivalent to those already on the market. In fiscal year 1996, we approved 43 PMA's, a 6-year high, and 24 major new products, an all-time high. Further, eight of the 15 PMA's submitted to FDA in the first half of fiscal year 1996 received a first action within the 180-day deadline—significantly better than in either 1994 or 1995.

Even though we are approving more PMA's for increasingly complex devices, and we have improved the time to first action, the PMA approval time is coming down only slowly. It takes too long—more than two years—to get a device through the process. We continue to focus on bringing down PMA review times, just as we have done in the human drug area.

FDA has also successfully managed the review times for 510(k) applications. In fiscal year 1996, the median review time for these devices that received a finding of substantial equivalence was 85 days. The reviews were almost 70 percent longer—144 days—at their peak in 1993. Even accounting for applications that had to be returned to the manufacturer for more information, the average 510(k) review time in fiscal year 1996 was 110 days, down from the peak of 184 days in fiscal year 1994.

Even with our best efforts, there is still room for improvement, particularly in the area of food additive petitions. In the past, we have fallen short on average of meeting statutory deadlines. However, in the past few years, we have made a concerted effort to improve in this area by speeding up the review process and reducing the inventory of pending petitions. Scientists from other program areas were shifted to petition review, the existing electronic information processing infrastructure was modernized, technical services were contracted out to third parties, and we provided guidance to petitioners on how to improve the quality of their submissions to the Agency. These efforts have paid off. In June 1995, there were 295 petitions in the

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inventory. By the end of fiscal year 1996, we had received an additional 82 petitions, yet the inventory was 60 below the total in June 1995. We approved the highest number of petitions in a decade—54—during calendar year 1996. Further, the median time from receipt to approval of food and color additive petitions decreased from 37 months in fiscal year 1993 to 27 months in fiscal year 1996. While we are still not where we want to be, we clearly are continuing to make progress.

The new user fees proposed in the budget would allow us to continue our current level of activity in each of these areas.

QUESTIONS SUBMITTED BY SENATOR BURNS

USER FEES

Question. The fiscal year 1998 budget request has a nearly \$68 million decrease for non-user fee budget authority, but a nearly \$69 million increase in total funding. The increase is accounted for by new user fees. What is the rationale for the decrease in budget authority, and how will the decrease affect the FDA's ability to review new and supplemental applications if new user fees are not authorized?

Answer. The Administration's budget for FDA should be viewed in total, keeping in mind that it fits in with the President's plan for an overall balanced budget by fiscal year 2002. The President's Budget proposes new user fees for many FDA activities in the context of constructing a balanced budget by 2002. The Administration believes these new user fees are appropriate funding mechanisms in that the industries regulated by FDA benefit from increased consumer confidence in their products.

If the proposed user fees are not authorized and the base resources replaced by these user fees are not restored, the impact across all FDA programs would be tremendously detrimental. The Administration is proposing new user fees of \$131,643,000, of which \$122,436,000 would replace existing base appropriation resources, and 1,120 FTE. Without new user fees or the restored base resources, the necessary reductions would be felt across each program area of FDA.

Further, the President's budget included new funding for food safety and tobacco regulation. At this point in time, I cannot say with any degree of certainty where specific cuts would be taken, but given the magnitude of the potential reduction, I can safely say that review times and backlogs for all FDA-regulated products would increase substantially. FDA's ability to fulfill its mission of protecting and promoting the health of the American public would be seriously undermined.

Question. Do you believe that new user fees, beyond those authorized under the Prescription Drug User Fee Act (PDUFA), are justified to offset decreased budget authority, and is this good policy in light of the success of PDUFA?

Answer. We believe that PDUFA, with its reliance on performance measures, goals, and program improvements can be a successful model for user fees in other FDA programs to enhance performance and efficiency. The industries regulated by FDA derive valuable benefits from some FDA activities, including increased customer confidence in their products and significant protection from liability. FDA's reputation also improves the competitive position of American firms in overseas markets. The President's budget proposes that the regulated industries contribute a share of FDA's cost of ensuring the safety and effectiveness of their products. The following are the types of user fees, by program area, being proposed by the Administration. We intend to work with Congress, industry and other affected parties to develop these or other proposals to achieve informed consideration of proposed user fees, and to ensure necessary funding for important FDA public health activities in fiscal year 1998. The new user fees proposed in the President's Budget and before the Committee are based on the PDUFA model but proposed in the context of balancing the budget by 2002.

QUESTIONS SUBMITTED BY SENATOR BUMPERS

FISCAL YEAR 1998 PROGRAM LEVELS (USER FEES)

Question. The fiscal year 1998 budget shows an increased program level, but assumes new user fees. What reception are you getting from the authorization committee and the regulated community from the user fee proposals?

Answer. New and expanded user fees were proposed across the Federal Government as part of the overall plan the President proposed earlier this year for a balanced budget by fiscal year 2002. FDA's authorizing committees in the House and Senate have not yet held hearings or invited testimony from FDA specifically on the

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user fee proposals, with the exception of a House Commerce Committee hearing on the Prescription Drug User Fee Act, or PDUFA. The House and Senate authorizing committees have expressed interest in timely reauthorization of PDUFA, which also has the highest support from industry. Although no extensive discussions have been held on the other user fee proposals, the regulated industry has not expressed support of these fees.

FDA FIELD OPERATIONS

Question. Over the course of the past several years, FDA has received overall increases in budget authority from this subcommittee. In fiscal year 1994, the total made available (including user fees) was \$869.6 million. For fiscal year 1997, the amount is \$995.9 million and you propose an increase to \$1.064 billion for fiscal year 1998. At the same time, I hear of reductions in operational activities at the field level. For example, I understand NCTR has lost 20 or more positions over the same period due to budget shortfalls. Would you respond to this issue.

Answer. In fiscal year 1994, NCTR utilized 249 budget authority FTE. The estimate of budget authority FTE utilization for NCTR in fiscal year 1997 and fiscal year 1998 is 223. This is a net loss of 26 FTE by the NCTR between fiscal year 1994 and fiscal year 1998. The bulk of this reduction, 20 FTE, is the NCTR program share of the President's initiative to reduce the deficit by streamlining Federal employment. The remaining decrease of 6 FTE is the result of the NCTR absorbing a share of agency-wide reductions.

NCTR base resources have been fairly consistent for the past several years, both in dollar terms and as a percentage of the Agency's total Salaries and Expenses appropriation. Fluctuations are attributable to the amount of one-time contract support made available to the NCTR. Reductions in funding for the NCTR and other programs have resulted from the Agency absorbing contract and salary inflation increases and a general decline in available operating costs to all FDA programs.

Question. What amounts of the budget that would have otherwise gone to NCTR have been used for other operational activities. What might those activities be? Which of these activities might be referred to as "initiatives"?

Answer. The adjustment of \$5.7 million in the amount planned for NCTR in fiscal year 1997 is not really a reallocation to other programs, but an adjustment to reflect the true continuing costs of FDA's major programs. The estimate for NCTR furnished to the Committee in mid-1996 was too high because it was based on an unusually high level of funding for NCTR in fiscal year 1995.

The reason that the obligations for NCTR were unusually high in fiscal year 1995 relates to the nature of NCTR's operating budget, which includes a number of support service contracts. NCTR relies on a high level of contract support for managing its facilities, maintaining its animal colonies, and for many other research support services. In past years, FDA has redirected funds toward the end of the year from other programs to NCTR for its contract support. NCTR's operating budget is then reduced by the same amount at the beginning of the next year so that the overall level of funding remains relatively constant. The Agency is not able to provide these additional funds to the NCTR at a consistent level every year, but endeavors to keep NCTR funding at a "base" level necessary to maintain its current level of operations. The Agency's current estimate for NCTR for fiscal year 1997 of \$31.3 million is very similar to NCTR's actual expenditures for fiscal year 1996 of just under \$31 million. The current fiscal year 1997 estimate reflects the current planned level of funding for NCTR and for all other programs.

The reallocations from the NCTR to the other program areas are not truly program increases or decreases, but adjustments to more accurately reflect the continuing cost in fiscal year 1997 of the level of program activities conducted in fiscal year 1996. However, since the fiscal year 1997 appropriation did not include inflationary allowances, all programs have had to absorb a reduction in their operating funds, and NCTR has had to absorb its proportionate share of this reduction. In partial compensation for this, the Agency did allocate an increase of \$533,000 to NCTR early in fiscal year 1997 to absorb some of the inflation in NCTR's contract costs.

NCTR LAB CONSTRUCTION

Question. I understand construction of the Arkansas Regional Lab (NCTR) is underway. Will the amount requested for fiscal year 1998 complete construction of Phase II at NCTR?

Answer. The fiscal year 1997 appropriation of \$13,000,000 for Phase I of the Arkansas Regional Laboratory, ARL, will support construction of the building, foundation, substructure, superstructure, exterior enclosure and roofing as well as major building systems such as fire protection, HVAC, electrical and some site work. The

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fiscal year 1998 request for \$14,550,000 will complete Phase II, the laboratory portion of the project, of the construction of the ARL, by completing building systems and providing laboratory fit-out. This amount is based on the Architecture and Engineering estimate. The construction bid process for Phase I is underway and will determine the exact amount needed to complete the ARL. Some portion of the ARL fit-out planned in Phase II is likely to be deferred to Phase III.

Question. What will be the total remaining cost to complete Phase III?

Answer. Phase III is estimated to be \$9,800,000 and provides the renovation of the existing NCTR Building 50 in its entirety to accommodate the common ORA/NCTR administrative and support area. This projection is based on the Architect/Engineer estimate. The construction bid process for Phase I is underway and will determine the exact amount to complete Phase III. Construction and construction management costs are estimated at \$37,400,000.

Question. Does FDA intend to seek a full request for Phase III in the fiscal year 1999 budget?

Answer. FDA and the ORA Laboratory Consolidation Plan require the completion of all Phases for the ARL project to be successful in providing the state-of-the-art facility and quality of work life environments which ORA and NCTR staff need. Hence, FDA will address the ARL project and Phase III in subsequent years.

LAB CONSOLIDATION

Question. Your plan for lab consolidation includes the Arkansas Regional Lab as a facility which will host operations current conducted at several other facilities. What is the status of FDA field lab consolidation?

Answer. In 1994, ORA received approval from the Secretary of Health and Human Services to proceed with streamlining laboratory operations. The plan calls for the creation of 5 large multipurpose laboratories in Seattle, Washington; Los Angeles, California; Jefferson, Arkansas; New York, New York; and Atlanta, Georgia; and 4 specialty laboratories in San Juan, Puerto Rico; Winchester, Massachusetts; Philadelphia, Pennsylvania; and Cincinnati, Ohio; for a total of nine field labs, replacing the current network of eighteen laboratories, over a 20-year period, from 1994 to 2014. FDA projects costs savings of \$112.7 million, based on the fiscal year 1997 annual review and updated cost estimates, namely rents and budget outlays toward lab consolidation. FDA will maintain inspection, public affairs and enforcement operations at the current District offices and resident posts. In fiscal year 1995, 1996 and 1997 appropriations, FDA received appropriations for the design and land acquisition for the Los Angeles and Arkansas new facilities; the construction of ARL Phase I core and shell.

Currently FDA has formulated Building and Facility plans including new construction, expansion, restructuring, and decommissioning, as well as personnel transfer plans which carry out the ORA 21 Laboratory Consolidation goals and coincide with current facility lease expiration dates.

In fiscal year 1997, three FDA laboratories, Buffalo, Chicago and Cincinnati are scheduled to be closed and two laboratories, Philadelphia and Winchester, MA, restructured. The fiscal year 1997 work plan comprehensively transferred the corresponding analytical programs and resources to the respective multipurpose or specialty laboratories. I would be happy to provide for the record a list of dates for either closing or restructuring for each of these labs as well as provide more detail on our planned laboratory consolidation.

[The information follows:]

Lab closure dates: Buffalo, October 1, 1996; Chicago, July 1, 1997; and Cincinnati, June 30, 1997.

Lab restructure dates: Philadelphia, October 1, 1996; Winchester Engineering and Analytical Center, July 1, 1997.

ORA 21 Multipurpose labs

1. *New York-Northeast Regional Laboratory, Northeast Regional Office and New York District Office-Jamaica, Queens.*—An authorization for prospectus was approved in 1994 with delineated area in the Borough of Queens. An Architect and Engineering or A&E Program of Requirements was prepared for 75,000 net sq. ft. laboratory and 100,000 net sq. ft. regional and district office facility. In fiscal year 1996, GSA/FDA finalized negotiations for the 4.5 acre site at York College, Jamaica Queens. GSA had intended to award the lease by April 1997. We have now been advised by GSA that the lead offeror has rescinded his proposal. GSA will now go to other offerors to continue the project. FDA occupancy has been scheduled for March-May 1999.

2. *Arkansas Regional Laboratory.*—In fiscal year 1995, Congress authorized \$2,500,000 for A&E design for the ARL. The ARL A&E design was completed in

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March 1996. In fiscal year 1996, \$3,800,000 was appropriated for the joint ARL/NCTR facility. In fiscal year 1996 funds were used for A&E design items including construction of an animal quarantine facility and preparation of space for an ORA Dioxin lab facility. ARL facility construction is estimated at \$37,400,000. Phase I construction funds were approved in fiscal year 1997. In fiscal year 1998, \$14,550,000 is requested to complete Phase II, the fit out of Arkansas Regional laboratory. Construction bid process is underway and award is anticipated summer of 1997. Phase III, the NCTR building 50 renovation and the new common ORA/NCTR administrative and support area was initially estimated at \$9,800,000.

3. *Los Angeles-University of California at Irvine.*—In fiscal year 1995, \$9,800,000 was appropriated for A&E design and land acquisition. FDA, through the Corps of Engineers, has awarded an A&E design contract to Zimmer, Gunsul, Frasca/HDR, and acquired 10 acres of land, at University of California at Irvine. FDA and the A&E firm have developed a design concept for the replacement laboratory, which is planned to house 75 laboratory staff and support personnel, estimated at \$26,500,000. No construction funds have been approved.

4. *Southeast Regional Laboratory.*—In fiscal year 1996, GSA issued a sole source Solicitation for Offer to construct 42,000 net square feet of lab and lab support space adjoining the current FDA complex at 8th and Peachtree Streets. The ground breaking ceremony occurred in January 1997. Construction completion and FDA occupancy is expected by December 1997.

5. *Seattle Laboratory.*—In fiscal year 1996, a 5,000 square feet expansion project of the lab was completed.

ORA 21 Specialty Labs

6. *Cincinnati.*—National Forensics Chemistry Center and Cincinnati District Office—The decommissioning of the current facility began in 1996. A prospectus was approved for 31,170 net square feet laboratory space and 13,930 net square feet of office space. Ground breaking occurred in October 1996. Construction completion and FDA occupancy is scheduled for late 1997 or early 1998.

7. *Philadelphia.*—GSA is proceeding to expand the U.S. Customhouse facility in Philadelphia by 8,378 square feet and accommodate 16–20 additional laboratory staff. FDA occupancy of new space on floors 10 and 12 is expected by summer 1997.

8. *San Juan.*—FDA will renovate and expand the facility to house 20–25 total laboratory employees by the year 2000.

9. *Winchester.*—FDA building and facility funds were used to establish an American Association for Accreditation of Laboratory Animal Care, or AAALAC, facility. Design of additional AAALAC facilities is under development and awaiting cost estimates.

Other Facility Activities

Decommissioning: Decommissioning schedules have been established for each closing laboratory upon lease expiration. In fiscal year 1996, FDA B&F funds totaling \$2,600,000 were ear-marked for facilities decommissioning activities at Buffalo, Cincinnati, Chicago, and New Orleans. In fiscal year 1997, decommissioning activities are scheduled for Baltimore, the Brooklyn complex in New York, and the Pico Blvd. facility in Los Angeles. In fiscal year 1998, decommissioning activities will commence for Dallas, Minneapolis and Detroit.

Personnel Activities: Voluntary transfers to other ORA labs:

In fiscal year 1995, 19 transfers at a cost of \$910,000.

In fiscal year 1996, 9 transfers at a cost of \$284,900.

In fiscal year 1997, the lateral transfer period has been extended throughout the fiscal year; to date 16 have been approved at an estimated cost of \$525,000.

Total cost to date is \$1,719,900.

Total transfers to date is 44.

Question. When will other field labs begin transferring operations to the Arkansas Regional Lab?

Answer. Once the Chicago laboratory closes on July 1, 1997, Chicago's dioxin program, 5 FTE, the high resolution mass spectrometer, valued at \$450,000, and, associated glassware and supplies will be moved into an interim laboratory facility. The interim laboratory facility is renovated space located in NCTR's Building 14. ORA plans to start operations at the dioxin laboratory by late summer 1997. ARL is anticipated to have 10–12 staff in Jefferson, Arkansas during 1997–1999.

Other ORA personnel, programs and equipment are scheduled for transfer upon their lease expiration dates. Laboratories in Detroit, Minneapolis and Dallas will be transferred to ARL during 1999 and 2000, and Denver and Kansas City during 2010–2014.

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Question. When will transfer of all operations to the Arkansas Regional Lab be complete?

Answer. The ORA Lab Consolidation Plan has scheduled full occupancy and completion of all transfers to ARL by 2014.

The ARL facility has a capacity of approximately 140 operational and support staff. Upon laboratory closures scheduled to take place by 2000, at Minneapolis, Detroit, Chicago and Dallas, approximately 55 operational FTE will be transferred to ARL. Additionally in between 2010 and 2014, upon lab closures in Denver and Kansas City, approximately 85 additional operational FTE will be transferred to ARL.

Question. What are the projected savings of this consolidation effort and what efficiencies will result?

Answer. FDA projects a costs savings of \$112.7 million, through 2014, based on the fiscal year 1997 annual review and updated cost estimates, namely rents and budget outlays toward laboratory consolidation. FDA will maintain inspection, public affairs and enforcement operations at the current District offices and resident posts.

ARL is an integral part of the Laboratory Consolidation plan not only from a programmatic efficiency standpoint but also because the completion of ARL and closure of the six existing labs contributes approximately 50 percent of the Lab Plan cost savings.

Let me provide for the record a statement made by the GAO about FDA lab consolidation efforts to date:

[The information follows:]

“ORA has used the Southeast Regional Lab, SRL, located in Atlanta, Georgia as the model of the future for the multipurpose/mega labs. SRL services the southeastern United States from Louisiana to North Carolina. This laboratory consistently meets time frames and has an excellent rapport with its customers. More importantly, SRL has a large enough cadre of scientists to conduct uninterrupted operations on a day-to-day basis and meet emergency and other non-routine requests that arise. It's this critical mass of experienced, equipped scientific staff, housed in a state-of-the-art lab, which provides the wherewithal to meet efficiency and effectiveness goals. Hence, the Lab Consolidation Plan incorporates these essential elements to efficiency at each of its planned mega-lab facilities.”

Similar efficiencies are expected from consolidation at ARL.

FISCAL YEAR 1998 INITIATIVES

Question. The fiscal year 1998 budget contains a number of new initiatives. One concerns tobacco. Another related to food safety. What amount of the tobacco “initiative” will be used for normal enforcement activities and please explain the items within this request that are actually new activities for the agency.

Answer. The tobacco initiative is a new agency effort. Implementation of the first provisions of the rule that went into effect in February 1997 has been underway for some time. It is normal for the Agency to train, commission, and contract with state and local officials for the enforcement of FDA regulations. That is how the tobacco rule will be enforced and, in that sense, the Agency considers these to be “normal enforcement activities.”

Question. What effect will the recent court decision regarding FDA regulation of tobacco have on this initiative or similar activities at FDA?

Answer. The February 28 access provisions have gone into effect and the Agency will continue to implement and enforce those provisions. The access and labeling provisions scheduled to go into effect this August were upheld but stayed by the district court. The advertising and promotion provisions scheduled to go into effect in August were overturned by the district court. The parties have appealed.

Question. If full funding is not included for your Food Safety initiative, will you be able to work with USDA, EPA, and CDC in a way to blend all resources, government-wide, into this effort or do you feel that FDA will not be a player to the extent of the other agencies?

Answer. FDA's fiscal year 1998 request provides adequate resources to maintain our current level of activities that were funded in fiscal year 1997. However, to go a step beyond our “every day efforts” to reduce the risk to health that foodborne microorganisms pose to consumers, we have requested additional funding for the Food Safety Initiative, or FSI, which is an important extension of all ongoing food safety efforts. Without this additional funding, we will not be able to work toward the goal of reducing the incidence of foodborne illnesses. Further, Seafood HACCP will be implemented at a much slower pace.

The federal food safety agencies will continue to respond to problems once they are identified, until the goals of the Food Safety Initiative are realized. The Food

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Safety Initiative will enable the Agencies to develop systems with strategies and mechanisms to anticipate and prevent most of the significant food safety problems. It is clear that outbreaks such as hepatitis in frozen strawberries, *E. Coli* in unpasteurized apple juice, and *Cyclospora* in raspberries, will only increase in terms of frequency. The ability of the Federal government, and in particular FDA's ability to prevent and respond to these situations, will be greatly enhanced by this new funding. The goal of the initiative is to reduce the incidence of deaths and illnesses associated with foodborne pathogens.

QUESTIONS SUBMITTED BY SENATOR HARKIN

SAFETY OF THE BLOOD SUPPLY

Question. I'm informed that prior to 1990 when blood was first screened for Hepatitis C, an estimated 300,000 people annually were infected with Hepatitis C from blood and blood products. While this has now been reduced to about 180,000 a year, the continued prevalence and increasing death rate from this disease merits attention. How has the FDA followed up on the recommendation last year by the House Committee on Government Reform and Oversight that the estimated 300,000 living recipients of blood and blood products who were infected with Hepatitis C prior to 1990 be notified of their potential infection so that they might seek diagnosis and treatment?

Answer. An estimated 3.9 million Americans are infected with Hepatitis C virus, or HCV. Seven percent, or about 300,000 people, acquired their infection from blood transfusions received prior to 1990. The number of transfusion-associated Hepatitis C cases each year has declined dramatically since the introduction of screening tests, and CDC currently estimates the risk from blood to be between 0.01 percent and 0.001 percent, per unit transfused, or no more than 1,000 HCV infections from blood transfusions each year.

Transfusion-associated risk is only a small proportion of the overall HCV infection burden in the United States. Most HCV infections in the United States are acquired from other sources and 8,000 to 10,000 people die each year from HCV-associated chronic liver disease.

The issue of notification of recipients of blood products from donors subsequently found to be infected with HCV, or look back notification, has been publicly discussed at the Blood Products Advisory Committee on several occasions.

In April 1997, the Department of Health and Human Services brought this problem to the attention of the first meeting of the PHS Advisory Committee on Blood Safety and Availability. This Committee includes representatives of industry, consumers, scientific experts and ethicists. Its purpose is to provide a forum to examine the broad public health and societal implications of blood safety issues. The PHS Advisory Committee provides advice to the Secretary of HHS. This issue also has been considered by HHS's Blood Safety Committee which includes the DHHS Blood Safety Director, the Director of NIH, the Director of CDC, the Administrator of HCFA, and the Commissioner of Food and Drugs. The Blood Safety Committee is involved in identifying issues for discussion by the PHS Advisory Committee.

At its April 1997 meeting, the PHS Advisory Committee considered the issue of HCV look back notification of recipients but did not issue recommendations. Among the issues discussed at the Advisory Committee meeting were the overall problem of HCV in our country; the patient's right to know about possible infection; the difficulty of tracing blood recipients; the utility of a targeted look back to certain populations such as the hemophilia community; and other issues. The PHS Advisory Committee indicated it would attempt to provide DHHS with recommendations in a timely fashion. The FDA is awaiting the recommendations from the PHS Advisory Committee on Blood Safety and Availability.

Question. Has FDA developed guidelines or standards that blood banks should use in notifying individuals of their exposure to Hepatitis C through contaminated blood or blood products?

Answer. Most plasma derivatives undergo manufacturing or viral inactivation procedures that will eliminate any HCV which may have come from donors whose positive status was not detected by the current screening tests. However, in some immune globulin products without viral inactivation, there have been transmissions of Hepatitis C virus in recent years. The FDA has acted in close concert with the CDC to identify such events and manufacturers have initiated notifications to alert individuals who received these blood products of their possible exposure. These products are now either virally inactivated or else tested for HCV by gene amplification and released for commercial distribution only if found to be negative for HCV.

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Transmission of HCV by blood component transfusion is more complicated. At this time, the FDA has not developed guidelines or standards to be used in notifying individuals of their exposure to Hepatitis C through contaminated blood components. Although effective donor screening has substantially reduced this risk since 1990, the best approach to identifying persons who become infected by transfusion both prior to and since 1990 remains undefined. This question has been brought before the PHS Advisory Committee on Blood Safety and Availability.

Options under consideration for recommendation by the Committee include recipient tracing based on knowledge of a positive donor, public health service announcements focusing on prior receipt of transfusion, and physician education regarding disease prevention, management and therapy. It is likely that some combination of these approaches will be recommended.

The CDC already has begun implementing a broad nationwide prevention and control plan for Hepatitis C. This program is aimed at early identification of persons with chronic HCV infection, including transfusion recipients, and reducing transmission in groups at high risk of infection. Three approaches are being used to identify and educate persons at risk of HCV infection: verbal, written, and visual material directed to the public; educational efforts directed to health care and public health professionals; and, development of community-based prevention programs.

CONCLUSION OF HEARINGS

Senator COCHRAN. Today's hearing concludes our review of the budget request for the President's fiscal year 1998 budget.

The subcommittee will recess and reconvene at the call of the Chair.

[Whereupon, at 11:50 a.m., Thursday, May 1, the hearings were concluded and the subcommittee was recessed, to reconvene subject to the call of the Chair.]

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AGRICULTURE, RURAL DEVELOPMENT, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1998

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

MATERIAL SUBMITTED BY AGENCIES NOT APPEARING FOR FORMAL HEARINGS

[CLERK'S NOTE.—The following agencies of the Department of Agriculture and one related agency did not appear before the subcommittee this year. Chairman Cochran requested these agencies to submit testimony in support of their fiscal year 1998 budget request. Those statements follow:]

DEPARTMENT OF AGRICULTURE

NATIONAL APPEALS DIVISION

PREPARED STATEMENT OF NORMAN G. COOPER, DIRECTOR

Mr. Chairman and members of the Subcommittee, I am pleased to appear before you to discuss the fiscal year 1998 budget request for the National Appeals Division—NAD.

MISSION

NAD was established by the Department of Agriculture Reorganization Act of 1994, Public Law No. 103-354. The mission of NAD is to carry out the provisions of that law in establishing an independent administrative appeals process. NAD conducts evidentiary hearings and reviews respecting adverse program decisions made by agencies of Rural Development, the Natural Resources Conservation Service, the Risk Management Agency, and the Farm Service Agency.

Program participants—appellants—have the right to appeal adverse decisions and to have a hearing before an NAD hearing officer in their State of residence. Once a hearing officer makes a determination, the appellant or the affected agency head may request a review of the hearing officer's determination by the NAD Director. NAD's final determinations are reviewable by United States District Courts.

NAD is headquartered in Alexandria, Virginia, with a small review and support staff, with three regional offices responsible for the activities of more than 70 hearing officers in three geographic areas: Eastern—Indianapolis, Indiana; Southern—Memphis, Tennessee; and Western—Lakewood, Colorado.

CURRENT ACTIVITIES

Recent accomplishments include:

—NAD conducted a national training conference in fiscal year 1996, and in fiscal year 1997 is conducting training conferences at three regional sites and at headquarters. These conferences provide development opportunities to ensure that NAD personnel are kept current of Administrative proceedings, current laws and regulations in the program areas that are subject to NAD jurisdiction. In addition, training is provided in standards of review, evidentiary considerations and judicial issues, ethics, and EEO.

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- In accordance with the Government Performance and Results Act, NAD has drafted its 5-year Strategic Plan and 1997 Annual Performance Plan.
- NAD interim final rules imposed a reconsideration requirement for Director Review Determinations, and NAD has developed a procedure for such reconsideration. Reconsideration of a determination of the Director may be requested by the appellant or the Agency within 10 days of receipt of the determination. The Director has 5 days to issue a decision on the request for reconsideration.
- An NAD directives system and a Hearing Officer Manual have been developed to provide a systematic method of communicating information and policy to the headquarters and field office personnel.
- A Civil Rights and Equal Employment Opportunity Advisory Committee consisting of representative employees from headquarters and the field offices was established to advise and help the Director.
- NAD has initiated a quality assurance program designed to enhance quality of decisions, advance the rights of program participants, and promote the lawful operation of agency programs.
- During fiscal year 1996, there were 6,137 appeals requested and 1,263 Director Reviews. Of the 1,263 Director Reviews, 1,006 were requested by appellants and 257 were requested by heads of agencies. Additionally, 54 requests for reconsideration were received.

FISCAL YEAR 1998 BUDGET REQUEST

For fiscal year 1998, NAD is requesting \$13,359,000 in direct appropriations. This request represents an increase of \$1,641,000 over the fiscal year 1997 appropriation. The increase consists of \$143,000 for pay costs, and the remaining \$1,498,000 will fund four initiatives.

The first initiative will enable NAD to replace the tracking system that now track appeals only for former Farmers Home Administration's cases. The current system cannot accommodate cases from other agencies that are now appealed to NAD. For example, if information on an appeal pertaining to a disaster program is requested, it must be obtained by a manual search, which is costly and time consuming. This limits our ability to provide Congress, USDA, and other interested parties, accurate and timely information regarding appeals handled by NAD, as well as to make informed management decisions. NAD needs to develop and procure a new tracking system to meet these requirements.

The second initiative provides necessary training to NAD hearing officers and review staff, as well as other employees. They must keep abreast of current laws and regulations, administrative procedures, and automation. To ensure fair and impartial determinations based upon correct application of laws and regulations, and guarantee the rights of program participants and the efficient operation of agency programs, hearing officers, in particular, must be trained in the proper methods of fact finding, hearing procedures, and application and analysis of regulatory authority. The NAD staff is dispersed across the country, and the development of a standard curriculum to include a minimum number of quasi-judicial courses to be completed within specific time frames would ensure a standard level of competency is reached and maintained.

With proper training, hearing and review officers will be able to render competent determinations based upon a required level of knowledge. In addition, they will be supported in rendering timely, complete, and correct determinations with assistance from NAD personnel with extensive knowledge of computer systems that support the hearing and review officers in affecting NAD's goal of timely, complete, and correct determinations.

The third initiative will fund the development of an automated system to provide hearing officers and the review staff electronic access to previous NAD decisions. This system will establish a mechanism that will be used by all NAD hearing and review officers to ensure consistency in NAD determinations, and it will supplement an NAD directive system that provides guidance on policy and law.

The fourth initiative provides for the enhancement of new computer equipment to ensure NAD employees are able to provide quality internal and external customer service in an efficient manner. Because of the geographically dispersed nature of NAD operations and its customer base, efficient and reliable data communications capabilities are critical to achieve quality, timeliness, and completeness goals.

We urge the Committee to approve these initiatives in the interest of improving the services that we provide to our stakeholders. NAD's primary stakeholders include: four statutorily-defined client agencies—Farm Service Agency, Rural Development, Natural Resources Conservation Service, Risk Management Agency; potential appellants—including all participants in programs administered by NAD's four cli-

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ent agencies and applicants for such programs, and advocacy groups that represent appellants.

NAD has streamlined its organizational structure effectively and efficiently to carry out its statutory mandate. To sustain its mission in delivery of high quality adjudication administrative appeals and reviews, NAD requires the appropriation requested.

This concludes my statement Mr. Chairman. I will be happy to answer any questions that the Subcommittee might have.

OFFICE OF THE CHIEF ECONOMIST

PREPARED STATEMENT OF KEITH COLLINS, CHIEF ECONOMIST

This statement discusses the functions and fiscal year 1998 budget request of the Office of the Chief Economist.

OCE is a small staff of economists, scientists, meteorologists and support personnel all located in Washington, D.C. The Office reports directly to the Secretary of Agriculture. OCE has three primary missions: 1) provide economic analysis to executive branch and Congressional policy officials on alternative policies, programs and regulations; 2) serve as a focal point for the collection and reporting of economic and weather data, forecasts and projections related to agricultural commodities and the performance of the agricultural economy; and 3) conduct statutory review and oversight responsibilities related to risk assessment and cost-benefit analysis of major USDA regulations. OCE consists of three functional units: the Immediate Office, the World Agricultural Outlook Board—WAOB, and the Office of Risk Assessment and Cost-Benefit Analysis—ORACBA. Recent activities and accomplishments in each of these three areas are briefly discussed.

IMMEDIATE OFFICE OF THE CHIEF ECONOMIST

The immediate office, with a staff of nine, directs a wide range of analysis related to policy, program and legislative proposals, and regulations. The focus is on only the most substantial, complex and controversial issues, usually at the request of the Secretary, other Administration officials, or members of Congress. The most important products are briefings, and briefing and analysis papers prepared on tight deadlines. These analyses generally focus on short-to medium-term effects, involve staff from other agencies, and apply the results of existing, basic economic research to specific policy issues. The immediate office staff is also responsible for regulatory review. A key role of the staff is to coordinate analyses among USDA agencies. OCE staff include the directors responsible for coordinating agricultural labor issues and sustainable development issues within USDA. Examples of key activities are:

Farm Bill Implementation.—Since passage of the 1996 Farm Bill, the staff of the Immediate Office has had a series of key implementation responsibilities. OCE coordinated analysis of, and the decision process for, the Secretary's decision to implement the Northeast Interstate Dairy Compact. OCE briefed the President's Chief of Staff twice on this issue and several members of Congress as well. OCE coordinated, with the Assistant Secretary for Marketing and Regulation, a review of the performance of the National Cheese Exchange—NCE—and analysis of options to replace the use of the NCE price in Federal Milk Marketing Orders. OCE also chaired USDA's Interagency Dairy Analysis Team which served as the reviewer for the concept proposals prepared by the Agricultural Marketing Service for Federal Milk Marketing Order consolidation and reform. OCE reviews resulted in material changes to the options released to the public for comment. OCE is also participating in the preparation of the economic analysis for the planned proposed rule on order consolidation and reform. OCE also served on numerous decision teams for the Secretary to resolve issues related to farm and conservation program implementation.

Commodity Market Analyses.—During the 1996/97 crop years, prices of wheat, corn and milk reached record highs. In the spring of 1996, cattle prices reached a 10-year low. OCE provided the Secretary regular briefings on the developments in commodity markets during this period. OCE coordinated development of the President's initiative to support beef prices, announced in April 1996, and participated in the briefing of the President. OCE coordinated the Secretary's initiative to stabilize milk prices, announced in December 1996, after the unprecedented decline in the Basic Formula Price.

Concentration.—OCE played a major role in the Department's efforts to understand and address issues of concentration in agriculture. OCE provided staff support to the Secretary's Advisory Committee on Concentration in Agriculture and co-chaired the Department's Response Team which reviewed the report and developed

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responses to its recommendations. The Team's efforts resulted in a number of programmatic changes in the collection and dissemination of market information.

Karnal Bunt Compensation.—OCE assisted Animal and Plant Health Inspection Service—APHIS—in establishing a compensation scheme for producers, handlers and others adversely affected by the Federal quarantine established for the eradication of Karnal Bunt. Activities included directing analyses of the effects of the quarantine on the wheat industry and developing compensation plans for producers, handlers, and flour millers.

Crop and Revenue Insurance Evaluation.—OCE assisted the Risk Management Agency—RMA—in evaluating the rating structure and reinsurance implications of revenue insurance. In cooperation with researchers at The Ohio State University and the Economic Research Service, a model was developed to evaluate the performance of the 1996 reinsurance agreement and to assist RMA in negotiating the 1998 Standard Reinsurance Agreement with crop insurance companies.

Testimony and Congressional Analyses.—During the past year, the staff responded to many Congressional requests for information or analysis. During fiscal year 1996 and early fiscal year 1997, OCE testified before Congress as the principal USDA hearing witness five times. Testimony was provided on the following issues: the effects of immigration reform on farm employers; risk assessment at USDA; allegations of price manipulation on the National Cheese; renewable fuels and energy security; estate and capital gains taxes. In addition, the Chief Economist frequently appeared before Congress with the Secretary, Deputy Secretary or others on issues ranging from the USDA budget, the Conservation Reserve Program—CRP, concentration, international trade to dairy policy.

Special Studies.—OCE has coordinated a number of special studies bringing together analysts from various USDA agencies to ensure the best expertise addresses the issue. For example, OCE coordinated the Department's response to the Environmental Protection Agency's—EPA's—proposed rule on particulate matter and ozone, and OCE has participated in executive branch analysis of the effects of global climate change. OCE chairs the Capper-Volstead Committee which responded to requests related to permissible activities of cooperatives. OCE responded to many requests for rapid analysis of issues such as the effects of the Florida freeze; the relationship between price volatility and commodity stocks policy; using cost of production to establish the Basic Formula Price for milk; economic effects of U.S. grain imports from Canada; effects of proposed changes in the Commodity Exchange Act; implications of foot and mouth disease in Taiwan for U.S. pork exports to Japan and for U.S. producers; U.S.-EU grain and oilseed Uruguay Round concerns; North American Free Trade Agreement; and regionalization of plant and animal health regulations. OCE participates in the USDA working group on the 1999 World Trade Organization agricultural negotiations including preparation of analysis of U.S. objectives and approaches. OCE also provides staff support to the Secretary's Special Assistant for Trade.

Regulatory Review and Clearance.—A major responsibility of the immediate office staff is to review and clear regulatory impact analyses of USDA regulations. During fiscal year 1996, OCE reviewed and cleared approximately 70 significant or economically significant regulations. This process often involves assisting the regulating agency with identification of feasible alternatives and planning the economic analysis. Examples of special rulemaking efforts this past year included the Conservation Reserve Program, the Environmental Quality Incentives Program, the Wildlife Habitat Incentives Program, avocado imports, and organic certification.

Agricultural Labor.—OCE fulfills the statutory mandate to consult with the Department of Labor—DOL—on regulations related to the H-2A Temporary Agricultural Worker Program. A major effort this past year involved working with DOL on a final rule issued in 1997 establishing the conditions under which a farm employer would be jointly responsible for actions of a farm labor contractor. Other key activities included rulemaking support to EPA through analysis of pesticide protections for farm workers, such as warning sign posting, decontamination sites, and analysis of immigration reform on USDA programs and on farm employment.

Sustainable Development.—OCE advises the State Department, Foreign Agricultural Service—FAS, and others of sustainable development issues for negotiations, treaty formulation and implementation, and trade discussions. For example, OCE led the USDA delegation to the meetings of the United Nations' Commission on Sustainable Development, which focused on issues of sustainable agriculture and forestry, and participated with FAS in representing USDA with the Asian Pacific Economic Cooperation—APEC—group. OCE serves as liaison to the President's Council on Sustainable Development and organized the USDA response to the Council's report, "Sustainable America—A New Consensus for Prosperity, Opportunity, and a Healthy Environment for the Future." A USDA Council on Sustainable Develop-

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ment, chaired by OCE, was established to develop, coordinate, and integrate the principles of sustainable development into policies and programs across all mission areas of the Department. OCE serves as liaison to the Council on Environmental Quality in its effort to develop a framework for measuring progress toward sustainable development and manages USDA efforts to coordinate work on performance measures and criteria and indicators for sustainable development.

WORLD AGRICULTURAL OUTLOOK BOARD—WAOB

The WAOB prepares world agricultural and weather assessments and coordinates USDA's work related to agricultural outlook, projections, weather, and remote sensing. The Board, with a staff of twenty-five, issues a monthly publication known as the *World Agricultural Supply and Demand Estimates* report and oversees long-term USDA forecasts required for preparation of the Federal budget. The Board also operates and manages the Joint Agricultural Weather Facility—JAWF—in cooperation with the National Oceanic and Atmospheric Administration—NOAA, and is home to the Department's Chief Meteorologist. In addition, it provides technical assistance and coordination for USDA's remote sensing activities.

Coordinating USDA Economic Forecasts.—The WAOB plays a critical role in assuring that the Department's commodity information system responds to today's rapidly changing world. The Board's mission is to ensure that USDA's intelligence on domestic and foreign agricultural developments is timely, accurate, and objective, and to speed the flow of that information to producers, consumers, and policy makers.

One of WAOB's primary functions is to coordinate and review all USDA forecasts and analyses of foreign and domestic commodity supply and demand conditions. The Interagency Commodity Estimates Committees are chaired by staff of the WAOB. The purpose of these committees is to assure that sound information from domestic and international sources is fully integrated into the analytical process and that USDA economic forecasts are objective, thorough, and consistent. The committees, with representatives from the Economic Research Service, Farm Service Agency, Foreign Agricultural Service, Agricultural Marketing Service, and WAOB, are responsible for developing official estimates of supply, utilization, and prices and reviewing economic reports issued by USDA agencies. In fiscal year 1996, the Board reviewed and approved for release more than 250 such reports.

Each month, the WAOB publishes *World Agricultural Supply and Demand Estimates*—*WASDE*—report forecasts production, trade, utilization, prices and stocks. Coverage includes U.S. and world grains, oilseeds, and cotton and U.S. livestock and poultry products and sugar. Release is simultaneous with the *U.S. Crop Production* report. *WASDE* is internationally viewed as a benchmark for agriculture and provides timely knowledge of world food markets that is increasingly critical to our export-led farm economy. Equally important, the *WASDE* report gives early warning of changing crop production and supply prospects in the United States and in other countries.

Monitoring Weather Impacts on Agriculture.—USDA places a high priority on incorporating weather-based assessments into all analyses. The focal point for this activity is the JAWF, operated jointly by the WAOB and NOAA of the Department of Commerce. The JAWF staff continually monitors and assesses global weather and its probable impact on agricultural output. JAWF briefings, reports, and special alerts are key inputs to the development of USDA crop yield estimates for both competitors and customers in world markets. JAWF weather assessments are widely available to the agricultural community and are made available to the public through the *Weekly Weather and Crop Bulletin*, USDA's electronic dissemination network, and the news media. In addition, WAOB now provides access to the *Weekly Weather and Crop Bulletin* through its home page. In 1996 the National Weather Service—NWS—proposed eliminating the *Weekly Weather and Crop Bulletin* as part of a plan to privatize weather services. WAOB, however, persuaded the NWS not to terminate this vital report.

During fiscal year 1996, through *WASDE* reports and the *Bulletin*, WAOB provided timely assessments of dramatic crop developments unfolding globally. Stocks of grains and oilseeds were depleted following reduced 1995 harvests in the United States and several other countries. In combination with continuing strong world demand, this created a very tight supply situation for 1996. Prices for some commodities reached record highs, triggering apprehension for consumers and a cost-price squeeze for livestock and milk producers. As growing conditions for winter wheat in the U.S. Southern Plains deteriorated from the fall of 1995 through the spring of 1996, the JAWF issued early warning alerts and provided timely assessments to USDA crop analysts. During the spring, the JAWF kept USDA on top of adverse

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weather that seriously delayed planting of crops in the Midwest. Meanwhile, early warnings and assessments were provided on foreign crop weather developments such as drought in the former Soviet Union, flooding in China, and late planting in the Canadian Prairies, as well as favorable weather in North Africa and many of the Southern Hemisphere's grain exporting nations.

Despite planting delays, prospects for U.S. crops improved during the summer, leading to increased U.S. production of grains, oilseeds, and cotton. Production increases were mirrored by larger grain harvests abroad, rebuilding depleted grain stocks and easing price pressures in early 1997. However, U.S. and world oilseed supplies are currently very tight in the face of continuing strong global use.

Disseminating USDA Numbers to the Public.—As commodity prices are affected less by Government programs and more by market forces, the need for objective and current market information is becoming especially critical. The WAOB recognizes the need for rapid information dissemination and strives to place the *WASDE* report *Weekly Weather and Crop Bulletin* in the hands of farmers and other users as quickly as possible. The goal is to provide simultaneous access at a minimum cost to all market participants.

Given the market conditions of the past year, there was great demand for rapid access to WAOB's supply/demand forecasts and weather analysis. The *WASDE* report was revamped to provide quicker access to key numbers. A new summary table on world oilseeds, meals, and oils provides a better perspective of competitive market developments for U.S. soybeans. The *WASDE* publication schedule was streamlined in May 1996 to enable release of cotton estimates at 8:30 a.m., rather than issuing them separately at 3:00 p.m. the previous day. The change, made possible by Section 870 of the 1996 Farm Bill, has reduced industry confusion.

Electronic release of the *WASDE* report was greatly improved to give much faster public access. Guaranteed time for posting of the report on the "USDA Economics and Statistics System" on the Internet, which has become extremely popular with data users, was cut from three to one hour after release, and actual release time is usually much faster.

A review of forecast reliability for estimates in the *World Agricultural Supply and Demand Estimates* report covering 1981/82 through 1994/95 showed the estimates to be statistically sound. The review found that *WASDE* forecasts improve as the season progresses, and that there are no systematic overestimation or underestimation tendencies. Export forecasts show greater variation, as exports reflect variability in both domestic and foreign production and markets. As expected, ending stocks reflect the largest deviations because, as a residual, all errors accrue to this term.

Information Exchange with China.—Obtaining good data from other countries is essential to USDA's international commodity forecasts. WAOB has actively participated in a series of information exchanges between USDA and China's State Statistical Bureau—SSB—to enhance USDA's international forecasts through a keener understanding of China's agricultural statistics, and to help China better understand the sources and uses of U.S. agricultural data. During a U.S. visit by the SSB in September to study data collection methods, WAOB explained its supply and demand forecasting procedures, and the use of weather and remote sensing in the process of outlook reporting. A USDA team then visited China to obtain similar information about SSB procedures in China. In subsequent exchanges, WAOB staff reviewed China's procedures for collecting statistics on grain and oilseed production and presented seminars on USDA's long-term agricultural projections.

Oversight of Long-Term USDA Commodity Projections.—WAOB chairs the Department's Interagency Agricultural Projections Committee that oversees preparation of long-term projections for farm commodities, the U.S. agricultural economy and world agricultural trade. The Economic Research Service has the lead role in preparation of the projections. WAOB's role is to ensure a strong multi-agency effort and sound analytical procedures for the projections. In the past year, procedures for projections of the U.S. farm economy and world farm trade were significantly improved.

The projections are used for a variety of analytic and mandated functions of the Department, such as preparing the USDA portion of the President's budget. They are also published in long-term baseline projections that provide an objective, rigorous, and thorough view of the likely path of the sector over the long term. The most recent set of projections, *Long-term Agricultural Projections to 2005 Reflecting the 1996 Farm Act*, was issued in February 1997 at the Department's annual Agricultural Outlook Forum.

The Forum, conducted under WAOB's leadership, is a public meeting on farm, food, and trade prospects. The 73rd annual Agricultural Outlook Forum, held in February 1997, explored the long-term impacts of the 1996 Farm Act, new trade agreements, and changes in the agricultural sector. More than 800 people attended

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the meetings to hear public and private analysts, farmers, and leaders from Government, agriculture, and international organizations discuss future prospects and issues. New USDA projections released at the Forum foresee strong growth in world food consumption and agricultural trade over the years covered by new farm legislation, and favorable trends for farm prices and returns.

Coordinating USDA Weather and Climate Activities.—During fiscal year 1996, WAOB recruited a new Chief USDA Meteorologist. A major focus of activity for the Chief Meteorologist has been the impact of privatization of specialized weather services by the NWS. NWS invited USDA to help draft a background report to Congress articulating the impact of cutbacks on agriculture.

WAOB is leading USDA efforts to revitalize plans for a National Agricultural Weather Information System—NAWIS, which was initially authorized in the 1990 Farm Bill. Alternatives are being developed to achieve cooperation with NWS and the private sector and linkages with existing local agricultural data collection networks to fill the void in agricultural weather information for all users.

With NWS's planned elimination of its Regional Climate Centers, the Cooperative Observer Program, a volunteer weather observing network known as the COOP network, is in jeopardy. The COOP network is a prime source of agricultural data throughout the Nation. The Chief Meteorologist is actively working with NWS to develop a plan to assure continuation of this vital program.

WAOB's JAWF represents USDA interests in a number of climatic activities, including liaison to the Office of the Federal Coordinator for Meteorology. The JAWF was appointed to chair a World Meteorological Organization—WMO—Working Group on Agrometeorological Data Management that includes members from Europe, Russia, Africa, Asia, and South America. Recently, the National Weather Service terminated all representation on WMO agricultural committees, and USDA assumed responsibility for representing all U.S. agricultural weather and climate interests.

The Chief Meteorologist has accepted a leadership role in the Western Drought Coordination Council. The Council was created by a memorandum of understanding between several Federal agencies and the Western Governors Association. USDA is the lead Federal agency.

WAOB's Joint Agricultural Weather Facility was involved in several interagency activities in fiscal year 1996. For example, JAWF staff continued to work closely with the Water and Climate Center of USDA's Natural Resources Conservation Service to formulate the second phase of implementation of a Unified Climate Access Network, which provides on-line access to weather and climate data from a variety of sources. Similarly, JAWF staff continued to provide meteorological expertise for a USDA team assembled to determine the incidence and extent of *Tilletia Controversa* Kuhn smut in the 1996 winter wheat crop.

As part of a broad cooperation agreement between the United States and South Africa, JAWF has begun an exchange of technical expertise and will help South Africa develop an improved weather data monitoring and information delivery system. The Oklahoma State University "Mesonet" system is being examined as an adaptable model.

Supporting USDA Remote Sensing Activities.—In its role as the Department's coordinator of remote sensing work, WAOB works to enhance the abilities of the six USDA agencies that make use of remote sensing for operational and research programs. The WAOB chairs quarterly interagency meetings to review current projects and facilitate data sharing. Through guest speakers, WAOB alerted agencies to technical advances and new sources of imagery data, including radar and planned visible band imager. On behalf of several USDA agencies, WAOB initiated discussions with the National Imagery and Mapping Agency to acquire radar imagery of flooded areas in the Midwest. Similarly, WAOB requested radar data from the National Environmental Satellite, Data, and Information Service of NOAA.

OFFICE OF RISK ASSESSMENT AND COST-BENEFIT ANALYSES—ORACBA

The principal task of ORACBA, with a staff of five, is to promote effective and efficient USDA regulation of hazards to human health, human safety and the environment. This is accomplished by bringing science and management together in policy and regulatory development. By statute, ORACBA is required to ensure that the analysis supporting a major rule proposed by USDA includes a risk assessment and a cost-benefit analysis for mitigation measures that are performed consistently, and use reasonably obtainable and sound scientific, technical, economic, and other data. ORACBA serves as a reservoir of expertise for analyses and information resources for conducting risk assessments and cost-benefit analyses and works with USDA agencies in coordinating analyses supporting major regulations. ORACBA is seeking

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closer ties with land-grant universities to promote multidisciplinary research in food safety, resource conservation, and other areas where USDA has regulatory responsibilities.

ORACBA also develops training programs and information resources which support the use of risk assessments and cost-benefit analyses for regulatory development. ORACBA has also taken steps to ensure that these analyses are held to high standards through peer review. These and other activities are undertaken to assure USDA leadership and the public that regulatory analyses rely on sound scientific and economic information and the most appropriate methods, and that the regulation provides protection against the identified risks in a cost-effective manner.

Current Progress in Expanding USDA Risk Assessment Capabilities.—ORACBA programs for training, information resources, analytical support, and peer review are the primary means for integrating risk assessment and USDA regulatory impact analysis. For example, in February 1997, ORACBA worked with the Food Safety and Inspection Service—FSIS—to conduct a 2-day risk assessment workshop specifically tailored to the agency's needs. In March 1997, ORACBA and the Food and Drug Administration jointly launched a 4-day course, "Introduction to Risk Assessment." Enrollment in this course, also to be offered for June and August 1997, will be available to other Federal agencies as well. ORACBA will continue to rely on training programs such as these to develop a trained cadre of USDA risk assessment professionals.

ORACBA's Risk Forum, a monthly seminar series on risk assessment issues, has begun its second year of providing top quality speakers to address major issues in food safety, resource conservation, and environmental risk assessment. The *ORACBA News*, also entering its second year, has become an important communication vehicle for the growing USDA risk assessment community. Over 650 copies of the most recent issue were distributed and is also available through the USDA website.

ORACBA is expanding ties to the research community to stimulate research in critical areas where USDA programs affect human health, safety, or the environment, and provide much needed depth to ORACBA programs. Beginning this fall, an American Association for the Advancement of Science—AAAS—fellow will conduct critical developmental research on agro-ecosystem risk assessment methods. In partnership with FSIS, a second AAAS fellow will be working to develop methods for food safety risk assessment. Through a Memorandum of Understanding, two scientists from the Agricultural Research Service will work this year directly with ORACBA on food safety risk assessment and risk assessment management for USDA's conservation programs. Through the Cooperative State Research, Education, and Extension Service, a scientist from an 1890 institution will lead a team devoted to the examination of a major hazard addressed by USDA programs and develop literature resources to support further risk assessment. ORACBA is also meeting with university groups to discuss issues and opportunities for multi-disciplinary risk assessment research.

Conducting Risk Assessments and Reviews.—ORACBA assisted the Natural Resources Conservation Service in the preparation of the risk assessment for the Environmental Quality Incentives Program—EQIP. Risk assessment experts were identified by ORACBA to provide technical assistance and guidance at critical steps in the process. Program agency and ORACBA personnel worked in a highly collaborative manner to conduct an ecological risk assessment that may be unique in its scope and complexity. ORACBA also coordinated interagency peer review of the EQIP risk assessment. The end result was a sound assessment of the risks addressed by EQIP and a sound basis to address future resource concerns under the program. ORACBA also helped the Farm Service Agency conduct the risk assessment for the Conservation Reserve Program. A process similar to the one for EQIP was used.

FISCAL YEAR 1998 BUDGET REQUEST

For fiscal year 1998, OCE is requesting \$6,408,000 in direct appropriations. This request represents a net increase of \$2,002,000 over the fiscal year 1997 adjusted base. The proposed budget includes an increase of \$56,000 for the annualization of the fiscal year 1997 pay raise and the anticipated fiscal year 1998 pay raise, and \$1,946,000 are for the following:

An increase of \$525,000 for Modernization of Weather and Climate Data Acquisition. The Department of Commerce, National Weather Service—NWS has redefined its mission and reduced its role in the weather and climate community. NWS has limited its role to data collection, archival, and distribution, the issuance of weather warnings, and general forecasting. Services tailored to specific communities such as

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agriculture have been terminated by NWS. Concurrent with a renewed emphasis on data dissemination, NWS is adopting state-of-the-art communications technologies known as the Advanced Weather Information Processing System—AWIPS.

USDA is a principal user of meteorological data as weather and climate affects all aspects of crop and animal life. In a modernized NWS, the collection, dissemination, and quality control of weather and climatic data will be accomplished on AWIPS equipment. AWIPS will be USDA's only means of access to the full suite of meteorological information from NWS and other sources. Requested funding will be used to purchase hardware and software necessary to fully implement the compatible AWIPS operational sites, install telecommunication hardware, and pay line maintenance and transmission charges.

To access the daily operational data available from the NWS, USDA proposes to acquire and install two AWIPS compatible hardware and software units at selected sites. These modern computer workstations include telecommunication links and adequate computer power to analyze and display the full complement of NWS data products. Installation of AWIPS compatible units will be accomplished in phases. The first will be located at the Joint Agricultural Weather Facility, USDA, Washington, D.C., and the second at a selected USDA site.

Without AWIPS compatibility, USDA will lose direct and real time access to all the weather and climate data made available by NWS. Dependence on secondary sources will result in data costs for which funding does not exist. Further, time delays associated with intermediate processing by secondary vendors will slow USDA's recognition and response to unfolding weather events.

To make economically sound management decisions, preserve and protect natural resources, and mitigate the impact of extreme and/or rapidly changing weather conditions, farmers and ranchers must have access to timely and accurate meteorological information. The new AWIPS technology at USDA will expedite the flow of basic information to agricultural users via publication in the *Weekly Weather and Crop Bulletin*, and for delivery of data from agricultural areas to the NWS for weather forecasts and warnings and to the private sector for specialized agricultural services.

USDA's initiatives will not replicate or substitute for private sector weather forecasting services. Requested funding will restore agricultural data lost to NWS budget cuts and will assure the continued availability of quality-controlled meteorological data to the private sector in a timely manner. Private sector meteorologists will, in turn, use these data to provide value-added weather products and services to the agricultural community on a contractual basis.

An increase of \$350,000 and 6 staff years for the National Agricultural Weather Observing Network—NAWON. With the redefining of the NWS mission and closure of agricultural weather offices, USDA has lost access to meteorological data critical to its mission. This funding will enable a partial restoration. The first priority of NAWON will be selectively to restore data sources lost to NWS cutbacks. Second, NAWON will expand the availability of agricultural weather and climate data by establishing linkages with existing weather and climate networks operated by Federal, State, and local agencies previously beyond the scope of NWS. Linking fragmented, agriculturally-oriented networks and developing an integrated data base will facilitate quality assurance, provide data needed by USDA, and improve the ability of NWS to forecast weather events in agricultural areas. All data collected will be made available to the private sector which, in turn, will generate "value added" products for the agricultural community.

These increases are partially offset by a decrease of \$29,000 and one staff year to support the President's Executive Order to reduce Federal employment.

An increase of \$1,100,000 and 4 staff years for the Commission on 21st Century Production Agriculture. The Commission on 21st Century Production Agriculture was created by the Federal Agricultural Improvement and Reform Act of 1996—FAIR—in order to make farm program policy recommendations to Congress regarding future farm legislation beyond the year 2001. The Commission will be comprised of three members appointed by the President and eight members appointed by the Chairmen of the Senate and House Agricultural Committees.

The Commission will conduct a comprehensive review and assessment of the success of production flexibility contracts in supporting the viability of U.S. farming; assess the economic risks to farms delineated by size; assess the changes in farmland values as a result of the FAIR; assess the extent to which regulatory relief and tax relief for agricultural producers is implemented; and assess the effects of trade embargoes, international trade agreements and export programs on U.S. agriculture; assess the likely effect of transferring peanut quotas across state lines; assess the personnel and infrastructure requirements of the Department of Agriculture necessary to support the future relationship of the Federal Government with

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production agriculture and make specific legislative recommendations to the Congress in this regard.

In order to fulfill its mandate, it is expected that the 11 member Commission will meet on a regular basis over a period of 39 months from October 1, 1997 to January 1, 2001; conduct hearings in various agricultural producing areas and trade centers; maintain a small office and a staff; commission studies and engage consultants with expertise in the various subject areas to be reviewed; and arrange for the production and printing of an interim report by June 1, 1998, and a final report of the findings and recommendations of the Commission by January 1, 2001. The total cost of the Commission for the 39-month period is estimated to be \$3.4 million.

That concludes my statement Mr. Chairman. I would be pleased to respond to questions.

OFFICE OF THE CHIEF FINANCIAL OFFICER

PREPARED STATEMENT OF IRWIN T. DAVID, ACTING CHIEF FINANCIAL OFFICER

Mr. Chairman and members of the Subcommittee, I appreciate the opportunity to appear before you today to discuss USDA's progress in improving financial management and to present the President's budget proposal for USDA's Office of the Chief Financial Officer—OCFO—and the Department's Working Capital Fund. With me today are Pearlie Reed, Acting Assistant Secretary for Administration, Allan Johnson, the Department's Associate Chief Financial Officer, Steve Dewhurst, the Department's Budget Officer, and Constance Gillam, my budget officer.

Mr. Chairman, most decisions by USDA's policy, program and management personnel have financial implications. When we in the Office of the Chief Financial Officer improve the quality of the information on which such decisions are based, we promote better, more effective Government. OCFO administers a variety of programs and activities, required by the Chief Financial Officer's Act of 1990 and delegated by the Secretary of Agriculture, to support decision making by our policy, program and management personnel. As examples, OCFO develops and maintains financial information systems and services; ensures that adequate controls exist to safeguard USDA assets and manage liabilities; fosters accountability for management performance Departmentwide; coordinates strategic planning and performance measurement; oversees implementation of the Government Performance and Results Act—GPR—in USDA; oversees the operation of the Departmental Working Capital Fund; manages the National Finance Center; and, provides budget, accounting, and fiscal services to the Office of the Secretary, Secretarial Level Offices, and Departmental Administration.

THE CHALLENGE TO FINANCIAL MANAGEMENT IN USDA

USDA is a large, decentralized agency with offices spread throughout the Nation and the world. The programs and activities which USDA administers are complex and diverse. As a result, requirements for financial information are complex and diverse. Currently USDA operates approximately 67 financial management systems with 133 different applications to meet these program requirements. The data in several of these systems are neither timely nor readily accessible. Several systems were developed to address specific agency needs, and issues of standardization and data interchange were frequently not addressed. Serious weaknesses in USDA's financial management systems and practices have been identified by the General Accounting Office, the Office of the Inspector General, the Office of Management and Budget, and others.

The challenge facing my office and the entire USDA financial management community is to revolutionize the financial management systems and programs of the Department, so that they produce quality information for users—both inside and outside USDA—whose needs may differ significantly. Accurate, timely, reliable, consistent and useful financial information are the key management requirements for effective program delivery decisions and assessments of the financial health, efficiency, and effectiveness of USDA and its programs.

This is not an easy task, nor one that can be achieved quickly. It requires establishing and maintaining consistent accounting standards and practices throughout USDA; measuring and evaluating performance of USDA programs; developing and maintaining financial information systems that are not just timely, accurate, reasonable in cost, and reliable, but responsive to the needs of end users. In addition, we must educate policy, program and management personnel to the importance and use of financial, strategic and performance information in planning for and managing their programs; and improving the competence of financial managers at all lev-

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els. Further, once we succeed in improving financial management within USDA, we must sustain or exceed the baseline levels set in order to inspire confidence in our ability to manage our programs effectively.

We are asking for a modest increase to meet this challenge. We know this is a time when most budgets are declining, but we believe that the investment we are asking you to make will more than pay for itself in terms of management improvements, increased program effectiveness, and increased efficiency. Before discussing the details of our fiscal year 1998 request, I would like to tell you what we are already doing to address USDA's financial management challenge.

FINANCIAL SYSTEMS

OCFO is leading a major effort to transform USDA's outdated, cumbersome, inefficient financial systems into a single, integrated financial information system responsive to the needs of USDA policy, program and management personnel. We have assembled a highly-trained, interdisciplinary team to begin the phased implementation of the Financial Information Systems Vision and Strategy—FISVIS, a system which will eliminate current system weaknesses. Such weaknesses have not only hampered effective decision making, but resulted in less than unqualified audit opinions on USDA's consolidated financial statement and some agency financial statements for the past five years.

USDA has made major strides in developing and implementing FISVIS. We have instituted financial standards—the language of finance—for all USDA entities, and are well on our way to implementing a single integrated financial information system, consistent with OMB directives. We expect that, when fully implemented, FISVIS will make it possible for USDA to integrate financial data with other information to promote better management decisions and program delivery. The estimated completion date for FISVIS is fiscal year 1999.

Implementing FISVIS, however, is just the beginning. The standards and the system must be maintained. OCFO must constantly update and monitor standards and ensure that all Departmental financial and mixed information systems—both current and planned—are consistent with the foundation financial system. We must ensure that agencies coordinate their system development activities to reduce the number of “stand-alone” systems, and provide faster and more accurate response to internal and external inquiries, improve interchange of data among USDA agencies and provide a standardized methodology for collecting and reporting financial information. We also will ensure that all financial systems are in compliance with the Department's Information Technology Architecture.

Implementation of FISVIS is crucial to achieving our financial management improvement goals because timely, accurate, reliable, and useful information is critical to improved financial management. Until FISVIS implementation is complete, however, we are systematically addressing the financial management weaknesses that have been identified by the General Accounting Office, the Office of the Inspector General—OIG, and others.

AUDITED FINANCIAL STATEMENTS

The members of Congress, public, and the Administration, as well as USDA policy, program, management and operating personnel are entitled to comprehensive, comprehensible, and consistent statements of USDA's overall financial position and results of operations. With poorly functioning financial systems, we are unable to attain an unqualified audit opinion for some of our agencies' financial statements. The less than unqualified audit opinions we have received over the years are largely due to problems in various stand-alone financial systems and supporting processes and procedures. The systems changes underway in FISVIS will resolve many of the problems. OCFO staff are working directly with USDA agencies, including the Forest Service, Rural Development, Farm Service Agency, Food and Consumer Service, and the National Finance Center to put in place systems, processes and management disciplines to eliminate system and management weaknesses. In fact, we have formed a unique partnership between the OCFO, the OIG and the agencies to resolve many of the identified problems. Our target is to achieve an unqualified audit opinion on the fiscal year 1998 consolidated financial statement.

ACCOUNTABILITY/MANAGEMENT CONTROLS

For the sixth consecutive year, USDA has not fully complied with the accountability, management controls and financial system provisions of the Federal Managers' Fiscal Integrity Act—FMFIA—of 1982. Thus, we have not been able to provide assurance that our management controls and financial systems provide adequate control over the assets entrusted to our care by the U.S. taxpayers. Many of the open

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FMFIA issues will be addressed by our new Department and agency financial systems. However, we are not relying solely on systems modifications to ensure accountability. The Secretary is requiring that each member of the Sub-Cabinet ensure that the accountability issues for which he or she is responsible are fully and satisfactorily addressed. In addition, we have simplified procedures so that agencies can devote more time to resolving problems and less to processing forms.

We are working closely with individual agencies, and these efforts are showing results. Our goal is to be able to report conformance with all aspects of FMFIA for fiscal year 1998.

COST ACCOUNTING

In this time of constrained budgets and increased needs, USDA policy and program personnel must know the full costs of providing services and to use such cost information for decision making and performance management. Cost information is also one of the crucial factors for judging performance under the Government Performance and Results Act—GPR. Such cost information must be available not only at the appropriation level—it must be available for programs, activities, functions, organizations and services. In addition, uniform full-cost information is fundamental to our ability to monitor the fees charged by USDA entities under various fee based programs, as required by the CFO Act. Implementing cost accounting systems in an agency as diversified and complex as USDA requires system modifications and new procedures. More important, effective use of cost information requires education and training of program managers to enable them to effectively use such information.

USDA is now in the initial stage of implementation of improved cost management principles. We are beginning to see results. For example, one USDA agency that provides services to other agencies, internal and external to USDA, has revamped its pricing structure based on an analysis of its costs. The agency is now more fully recovering its costs. In another instance, a program is being redesigned to reduce the cost and improve the quality of its services. In other examples, use of cost management principles are aiding in the modernization of administrative systems. These are examples of the effectiveness of cost management as a management tool. We are striving to institutionalize those techniques throughout USDA.

USDA is committed to complying with the Governmentwide standard of fully costing our functions, activities, outcomes, outputs, and programs. The financial systems we are implementing will accumulate cost information for sound decision-making, for cost/benefit analyses, for budgetary analysis, for performance measurement, to comply with OMB requirements and to provide better information to Congress and the public. In addition, the OCFO has undertaken a variety of activities, ranging from cost management training to policy and/or procedures development to technical oversight, advice, and assistance, to prepare policy and program personnel for the better use of such information. We are also planning to undertake our first reviews of charges, fees and royalties, as required by the CFO Act.

Better financial information is the key to sound financial management; cost information on programs, activities, functions, organizations and services is the key to sound decision making and performance evaluation.

GOVERNMENT PERFORMANCE AND RESULTS ACT

The Government Performance and Results Act—GPR—seeks to improve the efficiency and effectiveness of Federal programs by establishing strategic plans and performance goals, and measuring and evaluating performance against those goals. GPR also requires the participation of Congress and customers, partners, and employees in establishing the strategies and the goals. In USDA, OCFO is responsible for coordinating Departmentwide implementation of GPR.

GPR requires that the USDA Strategic Plan be submitted to OMB and Congress by September 30, 1997 and that the budget for fiscal year 1999 include its first Annual Performance Plan. Because of the diversity of USDA programs and missions, the USDA Strategic Plan will include an overall statement of the Department's mission and major themes summarized in an Executive Summary and the Strategic Plans of each Mission Area and Agency. In that way, interested readers can view USDA in totality as well as view the specific programs and functions in which they are interested.

USDA is well on its way to completing the Plan on time. Each USDA Mission Area/Agency has prepared a draft Strategic Plan. We plan to provide draft plans for Congressional consultation this Spring and to continue to seek input from customers, employees and stakeholders. The USDA Strategic Plan will be provided to Congress and OMB as required by the Act. In addition, we are preparing the Annual Performance Plans for submission with the fiscal year 1999 budget requests.

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The submission of the first strategic and performance plans is only the beginning of the process enabling USDA, and the Federal Government to manage by outcomes and results. The true value of strategic and performance planning and measurement will come over the years as we get feedback and gain more experience with these new disciplines. OCFO personnel will continue to work closely with agency personnel to refine both the planning, measurement and interpretation techniques so that they become the new management disciplines of the Federal Government. At the same time, use of such techniques will enable us to better communicate to the public the value of the services received for the resources entrusted to our care.

COST REDUCTION AND COST RECOVERY PROGRAMS

OCFO is undertaking a number of other initiatives aimed at reducing the cost of Government. I would like to briefly describe three such efforts:

Debt Collection.—Swift and effective collection of delinquent debt reduces the Federal Government's interest payments for financing that debt and prevents write-offs of uncollected debts. We are moving aggressively to reduce the amount of delinquent debt owed USDA, which approached \$8.7 billion in fiscal year 1996. The Debt Collection Improvement Act of 1996 has provided additional tools to aid us in this effort. For example, we are working with the Department of the Treasury to implement the Administrative Offset Program, designed to offset payments from any Government agency to any entity delinquent on a debt owed to any other Government agency. USDA has very successfully used the Internal Revenue Service offset program for a number of years. Further, barring delinquent debtors from obtaining Federal credit in the future will significantly improve our ability to reduce the amount of overdue debt owed USDA.

Electronic Funds Transfer.—The Debt Collection Improvement Act also mandates that all payments by USDA, as of January 1, 1999, must be made by electronic means—no more paper checks. Electronic Funds Transfers reduce the cost of making payments to recipients by using state-of-the-art electronic mechanisms. USDA has been at the leading edge of using electronic means for payments with over 90 percent of the salary payments from the National Finance Center made by direct deposit. We are now converting as many payments to electronic means as possible. Moreover, USDA is at the forefront of Federal Government efforts to receive and process vendor or invoice electronically.

Reengineering Travel.—Travel regulations and related processes and systems are incredibly complicated. We spend too many resources on the administrative aspects of managing travel. In accord with the Joint Financial Management Improvement Policy Task Force Report on Improving Travel Management Governmentwide, USDA has set a goal to simplify travel policies by using new electronic tools for reimbursing travelers. Thus, we have implemented several policy changes recently allowed by Congressional action and GSA policy, and we are revising our travel processes and systems to make them more useful to the traveler. Further, we plan within the next several months to initiate a complete analysis of USDA travel policies and systems so that we can modernize those systems and reduce the administrative costs of traveling.

CUSTOMER SERVICE

Because quality program and service delivery is essential to good Government, OCFO has made providing high quality customer service an integral component of all of our activities. During fiscal years 1997 and 1998, we are developing baseline levels of customer expectations and customer satisfaction throughout the organization. These baselines, in turn, will aid us in setting customer service standards, measuring and assessing our performance, determining needed program changes or remedial actions, and increasing our efficiency. We are working toward developing performance metrics that are meaningful and future-oriented, so that we can ensure successful organizational performance into the next century and beyond. This is crucial if we are to provide program managers and policy officials the tools they need to manage Federal resources effectively.

FISCAL YEAR 1998 BUDGET REQUEST

To continue our efforts to address the financial management needs of USDA, and to complete implementation of the CFO Act, we are requesting a budget of \$4,718,000. This is an increase of \$435,000 over our fiscal year 1997 current estimate and consists of an increase of \$60,000 for pay costs and an increase of \$375,000 to build upon the financial management efforts currently underway. We plan to focus the additional resources on activities relating to reviewing, approving and managing the Department's financial management systems design and en-

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hancement projects, overseeing the development and maintenance of the integrated central accounting system, developing an integrated accounting and budget reporting system, establishing a biennial review of all fees, royalties, rents, and other charges by USDA, reviewing the financial execution of the USDA agencies' budget, developing a simplified financial management budget for USDA, and implementing a Departmentwide financial management training program.

WORKING CAPITAL FUND

Mr. Chairman, I would like to provide an overview of our activities and plans for our Departmental Working Capital Fund for fiscal year 1998.

One of the important ways we reduce administrative and financial costs in the Department is by pooling resources to develop and operate central services. We do this through our Working Capital Fund, or WCF. The WCF provides 22 centralized services, ranging from the National Finance Center to central copying services. The OCFO manages the largest of the central services, the National Finance Center and provides financial oversight of the entire fund. I share with other managers of WCF activities the responsibility for ensuring that all WCF activities are managed in the most cost-effective manner possible.

The activities of our WCF provide services that your constituents, as users of our agricultural programs, never see. But without those services, the program agencies could not be as effective as they are. Since WCF services are not provided to the public directly, we have to be especially careful about our costs so that the programs that your constituents use can devote more resources to providing service and less to overhead. We have done an excellent job of keeping those costs down over the years through our WCF. For example, the National Information Technology Center, which provides computer services, will see prices for its service cut by a third from 1996 to 1998, from 51 cents per minute of use to 34 cents. We will see the costs to store standard forms in our warehousing facility cut by almost a fourth over the same period. Procurement actions processed on our automated contract system will be cut by almost 10 percent. When we cut costs for administrative services, program agencies have more resources available to assist your constituents.

Another important way we reduce administrative costs to our agricultural program agencies is by making our administrative services available to other Federal agencies, or cross-servicing. In so doing we can reduce unit costs by spreading our fixed costs of operations over a larger group of users. For over 10 years, we have enjoyed success in bringing other agencies into our systems and reaping the benefits in terms of lower unit costs to all of our users. For example, in 1989, when we began tracking unit costs by individual service, the average cost of payrolling an employee through the payroll/personnel system at our National Finance Center was about \$102 per employee. If you just added inflation to that cost from year-to-year, the cost to payroll an employee would be about \$134 per employee by 1998. In our 1998 budget, we expect to be able to do this for about \$104. This is more than 20 percent less than what we would expect to pay, given inflation.

The Congress has asked us to do more to make our services at the National Finance Center available to other Federal departments. I would like to bring you up to date on what we have been doing. In 1996, we began servicing the Federal Mediation and Conciliation Service and the Office of Congressional Compliance. We are scheduled to bring another four agencies into the National Finance Center over the next two years: the U.S. Capitol Police, the U.S. Architectural and Transportation Barriers Compliance Board, the Federal Housing Finance Board, and the Federal Elections Commission. We are pursuing several other potential clients for our payroll systems as well as other administrative payment systems.

We are also pursuing a number of marketing strategies to make our services more visible and appealing to potential users. For example, we held an "NFC Payroll/Personnel EXPO" here in Washington last October and participated in an information processing interagency conference in Austin, Texas, in December. We are scheduled to participate in at least four more conferences this fiscal year, allowing us to market the full range of NFC services to a wide audience. We are initiating use of the Internet for marketing of services and will be taking advantage of these and other opportunities to give our systems and services greater visibility over the next several months.

Other WCF activities are making use of "cross-servicing" agreements with other Federal agencies to reduce costs as well. As examples, the National Information Technology Center will be expanding its services to the General Services Administration over the next two years and the Consolidated Forms and Publications Distribution Center will expand its cross-servicing activity. The increased income will go a long way toward enabling these centers to reduce unit costs.

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Making our services attractive to customers requires continuous attention to and improvement of our systems. We are proceeding with several important initiatives to achieve these improvements. For example, we are in the process of modernizing our payroll/personnel system at the National Finance Center to take advantage of relational data base management systems. This will make new tools available for reporting and decision-support processing, and it will enable us to use client/server technologies that will combine the power and flexibility of work stations with centralized storage, backup, and recovery capabilities of our mainframe computers. Making the best use of existing technologies in the context of emerging processes and software applications is one way we can do more with less and make the services we offer more cost-efficient.

This year, our National Finance Center also will improve the system of paying the more than 26,000 telephone bills we receive each month through the use of electronic data interchange—EDI—technology. EDI technology will enable us to streamline processes, eliminating mail time and manual processing of documents. Over the next several years, we will be employing an Electronic Output Strategy to align changing business demands with emerging output technologies to reduce operating media costs, minimize duplication, and strengthen controls.

Another important ingredient in keeping our services state-of-the-art is keeping abreast of changes in technology and business processes. All of our activities are exploring investments in technologies and processes that will make the services we provide more efficient. To cite just one example, the Modernization of Administrative Processes—MAP—program completed work on making effective use of purchase cards for small purchases. We expect that customer agencies will be able to save up to \$15 per transaction and up to \$45 million in cost avoidances.

Given our reliance on technology to provide a variety of administrative and financial services, we must take special care to ensure a seamless transition to the year 2000. The National Finance Center is pursuing a “Year 2000 Ready” strategy to prevent any disruption caused by 2-digit-year dates. “Year 2000 Ready” means that date fields in all NFC products, programs, files, databases, and processes are systematically changed to accommodate the year 2000. This involves approximately 26,000 programs totaling over 22 million lines of code. NFC has had a plan in place for over a year to deal with this transition and is now on target for completing the plan.

What is particularly important to note here is that I do not come here asking for more money from the Congress for our WCF. The dollar figures provide our best estimate of what it is going to cost to provide the services that our customers demand, both USDA agencies and our non-USDA customers. We are entirely reimbursable; we recover all WCF operating costs through the rates charged for goods and services. We do not use appropriations to subsidize any of our activities. In that respect, the WCF and the services it supports operate very much as business enterprises.

We do, however, have a special obligation to USDA agencies as customers of our services. It is important that they participate in the oversight of our activities and financial management of the WCF. That is why last year we restructured the way we oversee the WCF and its activities. We created a WCF Executive Committee, made up of senior financial and administrative managers from our agencies to provide advice and counsel on financial management of the WCF. We also created a “working group” to provide detailed analysis of finances and operations from an agency perspective. Working with the WCF Controller and Departmental offices, we have a unique oversight process that ensures the effectiveness of the WCF. The cost estimates provided to you in our budget submission are the result of this cooperative oversight process—customers, service providers, and financial managers working together. The WCF is, in my opinion, one of the real success stories in financial management in USDA.

I have tried to give you a general idea of the reason we have a working capital fund and the benefits it can and does provide to the customers of the services it finances. The performance of our WCF and the plans for its activities in 1998 clearly show that customers, working together cooperatively with service providers, can save money and do things more efficiently, thereby freeing up resources to deliver services to your constituents.

I would be happy to answer any questions you might have.

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OFFICE OF THE CHIEF INFORMATION OFFICER

PREPARED STATEMENT OF ANNE F. THOMSON REED, ACTING CHIEF INFORMATION OFFICER

Mr. Chairman and members of the Subcommittee, good afternoon. I am pleased to present the fiscal year 1998 budget request for the Office of the Chief Information Officer—OCIO, U.S. Department of Agriculture—USDA.

THE OCIO ORGANIZATION

USDA established the OCIO in August 1996 to meet the requirements of the Information Technology Management Reform Act of 1996, and its successor, the Clinger-Cohen Act of 1996. All functions and personnel from Departmental Administration, Policy Analysis, and Coordination Center-Information Resources Management—PACC-IRM—were reassigned to OCIO. Subsequently, the Deputy Secretary has approved the consolidation of all Department-level information resources management functions under the Chief Information Officer—CIO.

OCIO provides Departmentwide policy guidance, leadership, coordination, and oversight of USDA information management and information technology investment activities to support USDA program delivery. My office provides long-range planning guidance, implements measures to ensure that technology investments are economical and effective, coordinates interagency Information Resources Management—IRM—projects, and implements standards to promote information exchange and technical interoperability.

I am honored to serve as the Acting Chief Information Officer for USDA, and during the past six months, I have set in motion a decisive course of action to address the issues, challenges, and new requirements that USDA faces in the information technology—IT—arena. Many of these issues and requirements are not unique to USDA but affect the Federal IT community as a whole. USDA senior officials recognize that some of our information technology activities in the past have raised concerns in the Congress, the General Accounting Office—GAO, the Office of Management and Budget—OMB, our own Inspector General, and the General Services Administration. I am here to assure you that OCIO has taken constructive steps to address these concerns. My mission is to provide effective leadership in the field of information technology and information management throughout the Department. OCIO has moved forward aggressively to further our goals and to accelerate the progress of activities currently underway. While much remains to be done, I would like to share some of our activities and accomplishments with you.

STRATEGIC PLAN

In accordance with Government Performance and Results Act guidelines, the OCIO initiated the development of a strategic IRM plan for the Department during the fall of 1996. Through this process, we identify a vision and set a course for the future. The identification of core business processes arising from strategic planning establishes a framework for modernization of operations. Survival of every organization depends upon its ability to modernize and continuously improve operations, deliver programs, and meet customer requirements. As USDA embarks upon the modernization of its program delivery structures, the efficient collection, management and dissemination of information is increasingly important. To meet information management demands, the approach of the USDA draft IRM Strategic Plan is threefold: first, invest in the planning process and ensure that technology selection and deployment are based on business needs; next, invest in the infrastructure to improve service delivery through more effective information systems and data management; and, finally, invest in human resources by implementing a professional development strategy to ensure that skills necessary to meet the challenges of delivering programs through information technology are available.

IMPROVED ACCOUNTABILITY OVER INFORMATION TECHNOLOGY

In the summer of 1995, the Secretary launched a major initiative to look at how we could improve and modernize our approach to information resources management in support of program delivery. The result was the USDA IRM Modernization Plan. The two highest priorities of the IRM Modernization Plan are to ensure senior policy-level accountability for IT investments and priorities and to establish an information technology architecture. To improve our decision-making process, we established two boards, one, the Executive Information Technology Investment Review Board—EITIRB, consisting of Subcabinet officials from each mission area and the other comprised of senior IRM officials from each mission area. The passage of the

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Clinger-Cohen Act of 1996 only served to intensify efforts we already had underway. The EITIRB is chaired by Deputy Secretary Rominger; I serve as the vice-chair. Membership includes mission-area Under and Assistant Secretaries and other senior management officials. The primary purpose of this Board is to make strategic investment decisions that will leverage our limited budgetary and personnel resources to meet our program objectives. The EITIRB will not only select the new investments but will also monitor and evaluate all technology investments to ensure that they deliver as promised. A number of factors, including greater recognition of the need to align business needs with information technology capabilities, OMB requirements, and Congressional interest, have contributed to a need for monthly meetings of the Board since the first of the year. Originally scheduled to meet quarterly, the Deputy Secretary has pledged to meet as often as necessary to address IT priorities and ensure that the right decisions are made to provide cost effective IT support for program delivery throughout the Department.

The second board, the IRM Council Board, composed of senior IRM managers from each mission area, provides guidance to me on technical issues. In addition, this Board provides assistance in the areas of technical analysis and the planning, implementation, and monitoring of projects affecting multiple USDA agencies.

Operating from different perspectives for meeting program delivery goals, these boards bring a much needed balance to decision-making that was absent previously. As a result, both have provided valuable input and recommendations on key Departmental decisions that have been made during the past six months, particularly those relating to development of the information architecture and instituting of the moratorium on IT acquisitions.

We plan to use this new decision-making process to ensure compliance with the IT architecture and the best value for USDA as we implement the decisions for 1998, and as we make decisions for fiscal year 1999. Our USDA fiscal year 1998 budget request for information technology is about \$1.2 billion, which includes the Department and all the agencies. Included in the \$1.2 billion are approximately \$234 million for acquisitions including equipment and software, \$253 million for commercial support services including operations and maintenance, \$474 million for intra-governmental payments including grants to the States and FTS 2000 services, \$326 million in personnel costs, and \$60 million in other services including non-FTS 2000 voice and data communications. Offsetting these costs are collections from non-USDA agencies of approximately \$179 million. Included in the acquisitions and commercial support services requests are several notable ongoing investments which agencies are planning for fiscal year 1998. The Food Safety Inspection Service is asking for \$8.5 million in fiscal year 1998 for Field Automation and Information Management to continue to modernize the way it inspects meat, poultry, and egg products using technology. The Animal and Plant Health Inspection Service—APHIS—is asking for \$4 million in fiscal year 1998 for the Integrated Systems Acquisition Project to continue to upgrade its existing technology infrastructure. This expenditure will support the APHIS mission of ensuring the health and care of animals and plants and improving agricultural productivity and competitiveness. Included in the intra-governmental payments are \$241 million in grants to the States that the Food and Consumer Service plans to spend for information technology in support of the Food Stamp Program and Special Supplemental Nutrition Program for Women, Infants, and Children, as well as \$54 million to implement Electronic Benefit Transfer in the States. These are selected examples of how USDA is improving its program delivery capabilities with technology.

INFORMATION TECHNOLOGY ARCHITECTURE

The second priority identified by the IRM Modernization Plan and one of the key responsibilities of the CIO defined in the Clinger-Cohen Act is the development and maintenance of an integrated information technology architecture for USDA. An architecture seeks to provide a blueprint or a common framework for Information Technology investments, including standards and operating policies that will assure that information can be shared more effectively among our agencies and customers. At this point, the USDA architecture is a high level document which establishes an umbrella beneath which we now need to fill in the pieces. It has three parts—the business/data architecture, the technical standards, and the telecommunications architecture. It is important to realize that because of changing business and legislative requirements, an IT architecture can never be considered complete—it is an evolving effort. The architecture reflects the Department's ongoing effort to develop a more effective process for making technology investment decisions that support USDA business needs. While we recognize that much work remains and plans are

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underway to implement the architecture and to continue the work necessary to refine it, I take great pride in what has been accomplished to date.

INFORMATION TECHNOLOGY MORATORIUM

In November 1996, Deputy Secretary Rominger instituted a moratorium on significant information technology acquisitions and certain telecommunications equipment acquisitions until the architecture is developed. Without a common architecture, our information technology activities in USDA would remain fragmented, and the risk of implementing additional stovepipe systems in our key business areas would be great. A temporary pause to step back, develop and apply consistent standards which enhance program delivery to every information technology investment is a good use of time, and ensures better use of scarce dollars. This action has constrained spending while we bring the architecture development together and has brought a higher level of focus on technology issues at the Subcabinet and Agency Head levels. A waiver process was instituted to avoid unacceptable disruption to the delivery of mission-critical programs. As of March 7, 1997, 18 waivers have been granted. Many were for required telecommunications lines, but others supported program missions such as laptop computers for Food Safety and Inspection Service inspectors. Overall, USDA agencies have supported the intent of the moratorium by limiting requests for acquisitions of new information technology and focusing resources on completing the architecture. Recently, the Deputy Secretary, at the recommendation of the EITIRB, decided to extend the moratorium to allow senior management to review and understand the new architecture. OCIO is using this time to meet with each mission area to facilitate the architecture education process and validate core business processes. During this time, OCIO is continuing efforts to refine a process for managing IT activities differently in the post-moratorium environment based on capital planning principles defined by the Clinger-Cohen Act and further defined by OMB in what has come to be known as the "Raines' Rules." These rules refer to OMB Director Franklin Raines' focus on ensuring that Federal agencies are doing the right things.

YEAR 2000

Another challenge facing all of us in the IT community is the Year 2000 date change to ensure that hardware, software, and IT applications systems are certified Year 2000 compliant prior to the turn of the century. There is potential for tremendous impact to the delivery of USDA programs. USDA has been working to prepare for this possible disruption through an integrated, coordinated strategy based on the Year 2000 Interagency Committee's 5-phased approach: awareness, assessment, renovation, validation, and implementation. Most agencies within USDA are in the assessment phase, with a few agencies in varying stages of renovation, validation, and implementation. The National Finance Center, the National Information Technology Center, and the Food and Consumer Service are examples of USDA organizations that have moved into the advanced phases. A Year 2000 Working Group has been established to exchange information across the Department, with particular focus on the sharing of lessons learned, the development of an applications systems inventory, and the establishment of contract services within USDA. In partnership with the Department of Energy, USDA sponsored a Year 2000 Exposition to increase awareness of Year 2000 issues and requirements across the Department. Because of the high visibility of the Year 2000 Project, USDA has responded to a series of requests from the Congress, OMB, and, GAO, which have required agencies to develop inventories and cost projections and to stay focused on planning functions for this complex undertaking. These cost projections have been included in the fiscal year 1998 President's Budget. Approximately \$35 million will be spent in fiscal year 1998. At the current time, the total investment planned for Year 2000 related projects is approximately \$100 million.

TELECOMMUNICATIONS

USDA is also working to establish a telecommunications environment that is optimized for maximum benefit and cost to the Department as a whole. With the telecommunications architecture as a guide, the existing Departmental and agency networks will evolve to become the USDA Enterprise Network, a completely integrated and efficient telecommunications utility. The Enterprise Network is the set of modern telecommunications resources needed to meet, in the most cost-effective manner possible, the current and future needs of USDA customers, personnel, and business processes.

The Telecommunications Services Redesign Project was initiated as a result of recognition of problems in USDA telecommunications processes. This project was

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chartered to conduct business process reengineering—BPR—of the administrative processes USDA uses to plan, procure, manage, and pay for telecommunications services and equipment. The BPR aims to achieve dramatic mission performance gains from customer and stakeholder perspectives. An interim report which defined the “As-Is” model, or current processes, was issued on November 15, 1996. The “To-Be” definition phase is underway and should be completed shortly. Rapid implementation of the “To-Be” model offers USDA significant savings opportunities in telecommunications administrative management activities.

We have worked closely with other Federal agencies on Governmentwide telecommunications initiatives. A recent example is a cooperative effort with the Department of Interior on its Alaska Regional Telecommunications Network—ARTNet. ARTNet is the first collaborative project in Alaska to address Federal agency requirements for developing a high speed network infrastructure that connects the Federal business centers of Anchorage, Juneau, and Fairbanks with the lower 48 States. I am pleased to announce that two USDA employees were members of the interagency team that received the National Performance Review Golden Hammer Award as a result of this effort.

Additional work must be done, but the telecommunications arena is one that will provide significant savings and efficiencies in the future. We are currently working to implement management controls, particularly in the areas of telecommunications planning and ordering, to derive immediate cost savings.

Over the coming months, new challenges await as we move forward to reassemble Departmentwide IT functions under the OCIO and continue to address the requirements of the Clinger-Cohen Act.

OFFICE OF THE CHIEF INFORMATION OFFICER BUDGET REQUEST

The fiscal year 1998 Office of the Chief Information Officer budget request totals \$4,828,000, an increase of \$330,000 over the adjusted fiscal year 1997 level of \$4,498,000. Of the increase, \$55,000 is to partially fund pay cost increases to maintain current services. The additional \$275,000 is required to fund my immediate office. This request will allow me to have a small immediate staff to enhance our leadership and coordination capabilities.

This concludes my statement, Mr. Chairman. I am happy to answer any of your or the Committee members' questions.

QUESTIONS SUBMITTED BY SENATOR COCHRAN

USDA'S IRM BUDGET

Question. For the last couple of years USDA's IRM budget exceeded \$1 billion. What does USDA plan to spend in fiscal years 1997 and 1998 for IRM activities, and how much will come from appropriated funds and how much will come from CCC funds?

Answer. In fiscal year 1997 the Department expects to spend just under \$1.2 billion for IRM activities. Of this total, about \$110 million is from CCC. In fiscal year 1998 we plan to spend just over \$1.2 billion for IRM activities, of which \$106 million is from CCC funding.

Question. What did USDA spend in fiscal year 1996 on IRM activities, and how much came from appropriated funds and how much came from CCC funds?

Answer. In fiscal year 1996, \$1.08 billion was spent for IRM activities, of which \$930 million was appropriated funding and \$150 million was CCC funding.

MORATORIUM

Question. We understand that USDA placed a Moratorium on significant information technology investments in November 1996 and continues to have a moratorium in place. How long does USDA expect to have the moratorium in place and what specifically must occur for the Department to lift the moratorium?

Answer. The moratorium on Information Technology—IT—acquisitions will remain in place until the USDA's information architecture elements are in place and USDA has established a solution to rectify IT management problems. Secretary Glickman has recently extended the moratorium and has requested a plan for achieving reform of IT management at USDA.

Question. With only six months remaining in fiscal year 1997, what impact will the moratorium have on USDA's IRM expenditure plan for fiscal years 1997 and 1998?

Answer. USDA's IRM expenditure plans for fiscal years 1997 and 1998 will be delayed due to the continuance of the moratorium.

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Question. What waivers were requested under the moratorium, which waivers were approved and why, and which waivers were denied and why?

Answer. The attached table identifies the waivers requested, approved and denied during the moratorium. The waivers which were approved were determined to meet a mission-critical program need, represented a more cost effective solution by sharing services and were compliant with the direction that USDA's information architecture elements were developing. Several waivers were denied because resources could be shared and/or optimized providing a more cost effective solution.

[The information follows:]

U.S. DEPARTMENT OF AGRICULTURE IT ACQUISITION MORATORIUM WAIVER REQUESTS
[As of June 2, 1997]

Agency	System name	Requested cost	Date received	Date out	Action
MASS	Dedicated T1 telephone line to California state office for farm labor statistics	\$200 per month	12/04/96	12/10/96	Approved.
GIPSA	Atlanta Regional office move—frame relay service request	\$1,000	12/13/96	12/26/96	Disapproved—existing services available.
NRCS	Field Office Computing System (FOCS) servers for field offices	\$5,000,000	12/16/96	12/30/96	Returned—incomplete information.
MASS	T1 telephone line from Census to Washington, DC, headquarters LAN	\$613 per month	12/23/96	1/8/97	Approved.
FSA	T1 line and cable for Dedicated Loan Origination and Servicing System in St. Louis	\$1,275 plus \$2,190 per month	12/26/96	12/31/96	Approved.
00	USDA Network Analysis	\$344,639	12/27/96	1/14/97	Approved.
FSIS	Field Automation and Information Management (FAIM)—inspector PC's and laptops	\$1,300,000	1/07/97	1/24/97	Approved.
FS	Telecommunications services and equipment for Custer National Forest, Billings, Montana.	\$68,337	1/9/97	1/24/97	4 of 6 parts approved; FS must justify not sharing with other agencies for the other two parts.
FS	Various telecommunications services for FS office moves in fiscal years 1997 and 1998 and temporary Emergency Situations (fire, earthquake, etc.).	\$74,300	1/9/97	1/17/97	5 approved; 5 denied for lack of information on sharing; 46 returned for additional justification and technical information.
AMS	AMS/Washington Service Center LAN Systems Segmentation—19 Ethernet switches	\$132,503	1/13/97	1/27/97	Approved.
APHIS	Automated Cargo System—PC's, servers, laptops, software, and telecom services for Miami, Los Angeles, and Houston to interface with U.S. Customs automated systems.	\$2,350,000	1/13/97	1/29/97	Approved with mandate for sharing telecom in certain locations.
APHIS	Integrated Systems Acquisition Project (ISAP)—PC's, servers, laptops, software, and telecom services for Ames, IA and Ft. Collins, CO.	\$2,092,399	1/13/97	1/29/97	Approved with mandate for sharing telecom in certain locations.
NRCS	Hardware and Software for Administrative Management Reengineering Test Lab	\$860,000	1/23/97	1/29/97	Returned for resubmission thru RD and FFAS Under Secretaries.
00	Resubmitted 2/12/97		2/12/97	3/7/97	Limited approval.
RD	Computer Associates Software Maintenance for NITC, Kansas City, WA.	\$19,675,000 over 5 yrs.	1/27/97	2/10/97	Returned—exempt from moratorium.
RD	Move current T1 telecommunications circuit from current state office to Olympia, WA.	\$2,000 installation	1/30/97	2/20/97	Disapproved—telecom services available at site.
RD	Telecommunications circuit between NITC-KC and Tax Service Data Center in Dallas, TX for DLOS.	\$599/month and \$1,600 installation.	2/5/97	2/25/97	Approved.
FCS	Frame Relay telecommunications services connecting headquarters, Regional Offices, and some field offices.	\$145,000 per year	2/7/97	3/4/97	Approved with mandate for sharing telecommunications.
OCFO	Direct Access Storage Devices for NFC, New Orleans, LA	\$1,200,000	2/13/97	3/3/97	Approved.
FCS	Dedicated Transmission Service—Atlanta Regional Office move processing fee.	\$341/month and \$825	2/13/97	2/25/97	Approved.
OCFO	Computer Associates Software Maintenance Contract for NFC, New Orleans, LA	\$24,000,000 for 10 yrs	2/13/97	2/25/97	Returned—exempt from moratorium.

U.S. DEPARTMENT OF AGRICULTURE IT ACQUISITION MORATORIUM WAIVER REQUESTS—Continued
[As of June 2, 1997]

Agency	System name	Requested cost	Date received	Date out	Action
FSA	Local T1 primary rate interface telecommunications line between CCC computing center and local Bell Atlantic for dial-in access to FSA's Novell network.	\$450/month and \$1,400 in-stallation.	2/18/97	3/11/97	Denied—implements an agency-specific, non-shared telecom solution.
00	NITC to purchase hardware, software and support services for potential contract with FAA's ICE-MAN workload.	\$19,920,000 only if win FAA bid.	2/18/97	3/21/97	Approved.
00	Redundant Arrays of Independent Disks (RAID) for NITC, Kansas City	\$1,500,000	2/18/97	3/3/97	Approved.
RMA	Modification of Revenue Assurance System for the Risk Management Agency	\$900,000	2/18/97	2/27/97	Approved.
NRCS	National Resources Inventory—550 personal digital assistants for collecting NRI data.	\$550,000	2/19/97	3/6/97	Approved.
NRCS	Local T1 telecommunications circuit from Natural Resources Council of America in Rosslyn, VA, to Washington, DC LAN.	\$375/month and \$1,500 in-stallation.	2/26/97	3/11/97	Approved.
FS	Telecommunications services at eight FS sites that are moving in next couple of months.	\$1,400/month and \$45,716 one-time cost.	2/25/97	3/13/97	6 Approved and 2 denied until share services with other agencies.
FSA	T1 telecommunications circuit to upgrade existing 56kb line at Kansas City	\$236/month and \$534 in-stallation.	3/4/97	3/11/97	Approved.
OCFO	Five T1 primary rate interface telecommunications circuits for Thrift Savings Plan access.	\$1,675/month and \$11,080 in-stallation.	3/5/97	3/17/97	Approved.
RD	Two large-scale routers for DLDS in NITC-KC	\$350,000	3/10/97	3/26/97	Approved.
FS	Reduce packet switched band width at Union, SC	Save \$79/month	3/13/97	3/24/97	Approved.
SCIT	Equipment to set up one phone number for SCIT service centers	\$917,500	3/5/97	3/21/97	Approved.
RD	Router networking boards for DLDS in St Louis	\$21,000	3/17/97	3/26/97	Approved.
NAD	National Appeals Division in Memphis, Indianapolis, and Denver—routers, ISDN lines, and 56KB circuit to GIPSA offices for sharing.	\$22,785 plus \$314/month	3/18/97	4/3/97	Approved conditional upon sharing with other USDA agencies at site and OCIO approving functional diagrams for need of routers for NAD.
FS	Telecomm equipment and circuits for relocation of four offices	\$600/month and \$14,175 one-time cost.	3/31/97	4/7/97 & 4/11/97	Approved.
FS	Voice grade circuit for radio comm. for Francis Marion and Sumter National Forests in South Carolina.	\$451/month and \$850 in-stallation.	3/31/97	4/14/97	Approved.
DA	Two hubs for Civil Rights Implementation Team's new location	\$2,752	4/3/97	4/3/97	Approved.
FS	PBX Switch replacement for one destroyed by lightning in Mark Twain NF, Rolla, MO.	\$1,000	4/4/97	4/4/97	Emergency approval with paperwork to follow.
OCIO	T1 circuit to upgrade existing frame relay between Kansas City and Washington, DC in-stallation.	\$3,245/month and \$1,781 in-stallation.	4/4/97	4/16/97	Approved.
FS	Project 615	\$81,000,000	4/3/97	5/1/97	Approved.

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Agency	Description	Amount	Start Date	End Date	Status	Notes
SCIT	Replace X.25 service with frame relay in five Kentucky counties	Savings of \$3,500 per month.	4/3/97		Returned for more info and Under&Asst. Sec. approval.	
FCS	Resubmitted 5/12/97		5/12/97			
FS	SIARS software development	\$350,000	4/11/97	4/29/97	Approved.	
RD	Emergency PBX replacement for Teton Basin Ranger District, Driggs, ID	\$10,000	4/14/97	4/14/97	Approved—paperwork to be submitted.	
FSA	Wetumpka, AL, Service Center move of 56KB circuit	\$2,000 installation	4/22/97	4/29/97	Approved.	
	Document Management Imaging System and temporary T1 to contractor's site	\$260,000 for support svcs. and \$6,000 for T1 install and usage.	4/15/97		Returned for more information and proper signatures.	
DA	Hub and T1 line for CRT in L'Enfant, Washington, DC	\$5,904 one-time cost and \$458/month.	4/22/97	4/22/97	Approved.	
ARS	Emergency telecommunications equipment replacement in Grand Forks, SD due to flooding.		4/22/97	4/22/97	Approved w/paperwork to follow.	
ARS	Replace old PBX in Ft. Lauderdale, FL	\$21,000	4/23/97	5/2/97	Approved.	
RMA	Support of reengineered systems development	\$2.5 million	4/28/97		In process.	
FCS	Special Nutrition Pgms. and Food Stamp Pgm. Integrated Information Systems software development and enhancement.	\$375,000	4/28/97	5/15/97	Approved.	
OCFO	Upgrade of mainframe computing capacity	\$4 million	4/28/97	5/19/97	Approved.	
FS	New phone system for Tofte Ranger District, Superior National Forest	\$14,400 one-time cost	5/8/97	5/16/97	Approved.	
FS	New PBX and circuits for relocation of Shawnee National Forest office	\$30,125 one time; \$1,800 per month.	5/8/97	5/27/97	Approved if consolidated.	
FS	Telecom equipment, circuits and services for Willamette National Forest	\$7,627 one-time cost and \$743/month.	5/8/97	5/16/97	Approved.	
FS	Telecom services for Great Lakes Assessment NPR Project at 3 FS offices	\$1,600 one time; \$1,100 per month saving.	5/8/97	5/16/97	Approved.	
APHIS	Telecom equipment and services to connect international offices to the State Dept. WAN.	\$10,000 one time; \$2,400 per month.	5/8/97	5/28/97	Approved.	
OCFO	Support services-programming for Thrift Savings Plan	\$350,000	5/8/97		In process.	
NRCS	Relocate telecom services for Auburn, AL, state office relocation	\$2,000	5/12/97	5/15/97	Approved.	
CSREES	Router—WSC	\$3,800	5/15/97	5/30/97	Approved.	
FS	Switched Video Transmission at SW Regional Office, Albuquerque	\$22,000	5/15/97	5/30/97	Approved.	
FS	Replace PBX—Willamette NF	\$22,000	5/15/97	5/28/97	Approved.	
FS	New Data Line—Tahoe NF	\$1,192 one-time cost and \$118/month.	5/15/97	5/28/97	Approved.	
FS	Move data line—Toccoa RD	\$7,000	5/15/97	5/30/97	Approved.	
NRCS	7 Soils Digitizing Offices	\$1.2 million	5/15/97		Returned for proper approvals and more information.	
GIFSA	Router and Ethernet Switch	\$9,300 one-time cost	5/19/97	5/27/97	Approved.	
NRCS	Servers, PC's, laptops, printers and X-terminals for meeting 1996 Farm Bill, Emergency Watershed Pgm., and maintenance (\$7.7 million).	\$7.7 million	5/19/97		Being returned for proper approvals and more information.	

U.S. DEPARTMENT OF AGRICULTURE IT ACQUISITION MORATORIUM WAIVER REQUESTS—Continued
 [As of June 2, 1997]

Agency	System name	Requested cost	Date received	Date out	Action
OCIO	Router to enhance USDA Internet Access Network node in DC	\$15,300 one-time; \$1250 per year.	5/19/97		In process.
FS	New phone system for Superior NF, Kawishiwi Ranger District	\$19,000 one-time cost	5/21/97		In process.
FS	New phone system for Superior NF, LaCrox Ranger District	\$13,000 one-time cost	5/21/97		In process.
FS	New phone system for Superior NF, Laurentian Ranger District	\$18,200 one-time cost	5/21/97		In process.
FS	Move telephone circuits when Wakulla Ranger District Office (Florida) relocated	\$1,275 one-time cost and \$375/month.	5/29/97		In process.

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INFOSHARE

Question. We appropriated \$7.5 million to the Secretary in fiscal year 1996 specifically for the InfoShare program. Provide a breakout of how much of the \$7.5 million has been spent to date, and what specifically was accomplished with these expenditures.

Answer. I will provide the information for the record.
[The information follows:]

InfoShare / service center implementation obligations to date

[Dollars in thousands]

<i>Project</i>	<i>Obligations</i>
InfoShare Transition	\$495
Kentucky Pilot	438
Telecommunications	500
BPR/BPI	1,300
Change Management/Customer Service	2,850
Service Center Implementation Project Management	330
Departmental Administration/Chief Information Officer Oversight	150
Total Obligations	6,063

The \$6.063 million obligated to date were designated by the National FAC to undertake change management, business process reengineering/improvement and shared data management activities. These activities define both how we will work in the future and the technology which will enable effective implementation of re-engineered/improved processes in support of quality customer service.

Business Process Reengineering/Improvement.—A BPR Management Review Board (MRB) has been established consisting of the NFAC Executive Officer, partner agency Deputy Administrators for Programs and Management, and Project Executive Sponsors. The Chief Information Officer, Chief Financial Officer and Director of the MAP Program Office serve as advisors to provide Departmental coordination and oversight. The MRB serves an advisory and assistance role, to assist in dispute resolution and to ensure that adequate resources are available to complete the projects. Each BPR Project is headed by an Executive Sponsor, responsible for assisting teams in project development and oversight, and a Team Leader responsible for ensuring that the team follows the applicable problem solving techniques. BPR Teams are facilitated by a contractor with proven expertise in BPR methodology. The teams consist of headquarters and field personnel representing the partner agencies.

The BPR process is overseen on a broader policy level by the Deputy Secretary and the Under Secretaries.

Thirteen areas have been identified as targets for BPR because of the potential for significant savings. Four of the BPRs—Customer Interface, Customer Service—Program Delivery, Geospatial Information Services, and Administrative Management—will be completed by September 1, 1997. A BPR framework has been established that will allow the Service Center Implementation Team—SCIT—to build on the successes of the first four projects. Recommendations from the first four BPR projects will be tested and deployed to the field in 1998. Follow-on BPR's will begin in the September, 1997 timeframe. The second phase of BPR's will build on the first phase and build on integrated customer interface and program delivery.

Shared Data Management Initiatives.—Shared data management provides the foundation layer for reengineered/improved processes which can be utilized across agency/mission lines. The Service Center Data Sharing Team is building on earlier work to develop departmental data element standards and is piloting a shared data repository. Full implementation of this project depends on future funding levels.

Change Management.—The training approved by the National FAC "USDA Service Center Skills: Working Together for Customers" provides Service Center employees the skills to deal with organizational changes as well as the skills to deal with such issues as downsizing, relocation, and reassignment of duties. It also brings employees together to address how they will work together as a team to better serve rural America and gives practical steps to providing extraordinary customer service. Employees in all 50 states, Puerto Rico and the Pacific Basin have been trained to facilitate this program. Approximately 2000 service center employees have already received this training. All service center employees will be trained by December 1998.

Additional Customer Service Listening.—To ensure that USDA Service Centers serve customers, USDA has asked customers about their experiences, opinions and

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needs. In order to reengineer business processes we needed to know what customers value in service delivery. Two systematic methods were implemented to obtain this information—focus groups and surveys. A prototype customer complaint and feedback process has been developed based on customer opinions and recommendations acquired in focus group interviews and surveys. The prototype is consistent with the guidelines of the National Performance Review team as presented in their March 1996 report “Serving the American Public: Best Practices in Resolving Customer Complaints”.

In addition, a service center implementation plan has been developed. The four goals: One Stop Service, Quality Customer Service, Cost Reduction, and Partnership are driven by a desire to satisfy customer needs and Department fiscal necessities. Customers have been surveyed to determine their needs and the extent to which they are satisfied. These needs have been translated into business drivers which are the catalyst of the BPR recommendations. The primary measures being tracked in the “AS IS” and “TO BE” business processes are quality, cost and service. The strategic plan is being updated to reflect changes made in the Departmental and Agency strategic plans. The revised strategic plan will link service centers goals, objective, and performance measures to those of the farm service agencies and the Department. The BPR objectives and resulting recommendations are being driven by the current organizational goals and objectives. It is the intent of management to measure the results of the BPR recommendations in testing and post deployment against the service center, agency, and departmental goals. This performance driven approach is being refined as we get better at quantifying success.

The current plan includes additional focus groups to pilot and evaluate the customer complaint and resolution process but it does not include any follow-on actions. Our progress depends on future funding levels.

Union and Partner Relationships.—An integral part of any change management program and foundation for ultimate success of implementing reengineered processes is having an open and trusting relationship with the unions and employee associations. Without their understanding and support, implementing change is almost impossible and the dramatic results planned often fall short of expectations. Without additional funding, this critical relationship and the ultimate success of our change effort may be negatively affected.

Kentucky Project.—This program provides a test bed of uniformly equipped computer integrated USDA County offices using client/server technology to enable offices representing multiple agencies to share data and information, and communicate with each other. SCIT funding started this pilot project by covering the initial equipment acquisition and installation, and telecommunications costs. Although the pilot program was turned over to the Kentucky State Food and Agriculture Council in fiscal year 1997, this program will continue operations under a coordinated plan developed by the partner agencies to utilize it as a test bed for new applications resulting from BPR/BPI projects. The pilot program will be continued until replaced by the common computing platform which will be deployed in fiscal year 1998. BPR outcomes will define the ultimate platform which will be deployed for the use in USDA Service Centers. Until that time, this test bed will be used as a learning and testing laboratory.

Telecommunications.—Our geographically diverse field service structure requires a robust and cost effective telecommunications system to deliver service to our program recipients. As this is a need common to other USDA agencies, we invested \$500,000 for a proportional share of the Department’s contract effort to develop and deploy a USDA Enterprise Network. This contract vehicle provides specialized expertise and services for development of deliverables in support of USDA’s Enterprise Network architecture. The final report will be completed by the beginning of fiscal year 1998.

Question. How much of these funds have not been spent as of this date hearing?

Answer. To date, about \$1.4 million of these funds remain unobligated.

Question. Provide a breakout of how the Department plans to spend any funds that still remain unobligated and what will be accomplished with these expenditures?

Answer. I will provide a table describing our plans for the remaining balance.

[The information follows:]

Service center implementation projected obligations

[Dollars in Thousands]

<i>Project</i>	<i>Obligations</i>
BPR/BPI	\$168
Change Management/Customer Service	567

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<i>Project</i>	<i>Obligations</i>
Service Center Implementation Project Management	51
Future Oversight Needs	651
Total Projected Obligations	1,437

REENGINEERING BUSINESS PROCESSES

Question. This Committee two years ago provided several expectations relating to reengineering business practices, addressing other oversight concerns, and implementing a Departmentwide information systems technology architecture. Each of these were to be completed prior to USDA acquiring new technology. Some of these expectations are now requirements under the Clinger-Cohen Act. What progress has USDA made to reengineer business processes, which is now required under Clinger-Cohen, and what specific timeframes and milestones exist for completing this very important effort?

Answer. We have been successful in revising work processes in several areas prior to investing in technology. Examples include:

- Our credit card purchase systems have reduced costs associated with small purchases;
- Business process reengineering is a major part of our Service Center Implementation strategy, as we follow the requirements of recent legislation and the guidance from oversight bodies that we review and revise work processes before applying technology;
- Meat inspection processes have been altered and will improve food safety. Computerized reporting is an important aspect of the new processes;
- The Modernization of Administrative Processes—MAP—program has been in the forefront of departmentwide process analysis and redesign for some time.

Four business process reengineering projects are underway as part of our Service Center Implementation—SCI—effort. These projects focus on community outreach, customer service, providing geospatial—map-based—information, and administrative management. The SCI team plans to construct a mock-up service center site on or about September 1, 1997, where the four BPR projects would be integrated with one another, and the appropriate technologies identified. Pilot testing will be done at operational sites during fiscal year 1998.

The Department, in conjunction with the interagency CIO Council, has already begun developing a Capital Planning and Investment Control process which addresses sections 5122 and 5123 of the Clinger-Cohen Act. Business process analysis and reengineering will continue to be important factors in our decisions to acquire and deploy information technologies. In concert with the requirements of the Clinger-Cohen Act, the Office of the Chief Financial Officer has drafted the departmental guidance for meeting the GPRA requirements. This guidance directs our planning efforts, and will help us as we develop performance indicators, measures and benchmarks.

Question. What progress has USDA made to address other oversight concerns, such as establishing a usable project management system to track project activities and a comprehensive budget tracking and accounting system to identify and report agency expenditures?

Answer. While USDA does not have a central project management system to track project activities, individual agencies have long used project management for their projects. Most USDA project managers currently use off-the-shelf software to track and report on their projects. While individual project tracking software is largely not integrated with agency budget and accounting systems, there is growing recognition that using recognized project management practices such as reporting on variances for cost, schedule and performance is vital to meeting the new planning and reporting requirements for information technology systems development.

With the advent of the Clinger-Cohen Act, more emphasis is being placed on the management of projects on a portfolio basis. The Capital Planning and Investment Control Process, which is under development in OCIO, places greater emphasis on developing standardized project reporting systems right from the onset of the initial planning stage of a project. As standardized and modernized accounting systems are being introduced within agencies, the ability to track project tasks and identify expenditures will become commonplace, subject to budgetary constraints.

Question. To what extent has USDA examined and implemented a Departmentwide information systems technology architecture, which also is now required under Clinger-Cohen, and if is not yet implemented, when does USDA expect to accomplish this?

Answer. USDA has historically operated as a conglomerate of separate agencies pursuing their legislated mandates. In more recent times, however, as the Depart-

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ment continues to provide leadership for the world's agricultural resources and manages with diminishing human and financial resources, USDA recognizes that effectiveness can be achieved and economies gained through coalescence of business activities and information and information technology resources. Under the leadership of the Chief Information Officer, USDA has developed the USDA Information Systems Technology Architecture—ISTA—to meet these immediate and future needs.

The successful implementation of this architecture is critical to USDA's ability to meet today's mission requirements and to position itself for agricultural leadership in the 21st century. As USDA continues to advance its information technology investment strategy, USDA will employ the ISTA to guide its decisions. The ISTA is a living document and will be continually refreshed to ensure that USDA employs established and emerging technology to meet its strategic business needs.

As the IT architecture and associated IT procurement and deployment issues have become more defined during the moratorium period, it has become extremely important that USDA efforts focus on the actions required to effectively implement the broader strategies set forth in the high level architectures. To support agency decision makers, OCIO has developed a set of criteria to guide Agency IT investment decisions. This criteria describes architecture issues which must be addressed by USDA agencies before investing in IT. Architecture issues specifically focus on:

- IT investments which are consistent with Federal, agency, and bureau information architectures which integrate agency work processes and information flows with technology to achieve the agency's strategic goals;
- reflecting the agency's technology vision and year 2000 compliance plan; and
- specifying standards which enable information exchange and resource sharing, while retaining flexibility in the choice of suppliers and in the design of local work processes.

USDA is moving forward to institutionalize the mechanisms required to ensure implementation and further integration and management of the ISTA. Through a number of processes and procedures, USDA is addressing the required management mechanisms and tools to ensure successful implementation, assessment, and monitoring of the USDA architecture.

Implementation of the ISTA has already begun and will continue as a dynamic process as USDA continually addresses its business delivery needs for an information intense society. For example:

- a project plan is in place and addresses each of the three areas of the architecture;
- technical standards working group has been formed and is actively engaged in defining standards in the areas of computer hardware and software;
- an independent verification and validation program is underway and provides critical reviews of management approaches and technical solutions;
- the OCIO is engaged in an inter-agency effort focused on interoperability issues.

Question. How is USDA ensuring that the information architecture is driven by business needs and as well as strategies required under GPRA, and will support re-engineered business processes?

Answer. USDA employs the strategic planning principles for information technology resources as required by OMB Circular A-130, coupled with those of GPRA. The importance of strategic planning has been emphasized to all USDA mission areas and agencies. The Office of the Chief Information Officer and the Office of the Chief Financial Officer—OCFO—recognize the critical link between an agency's strategic plan and its IT plan. As part of the Department's strategic planning process, OCFO asked the agencies to include one or more goals relative to information technology and program administration.

Agencies were asked to coordinate their plans with those of other mission areas and agencies to ensure that all cross-cutting issues, including IT, have been identified. Agencies were asked to meet among themselves to assure consistency of the plans and that each plan uses consistent language to describe the identical activities.

During the moratorium on IT acquisitions, waivers have been granted with mandates for resource sharing among agencies, and have been disapproved when it has been shown that shareable resources already exist.

OCIO is currently working to further develop the process to ensure critical linkage of the strategic business goals to IT investments. OCFO and OCIO have held several meetings to discuss approaches for accomplishing this, including linkage to the Capital Planning and Investment Control—CPIC—process. Reengineered business processes will be addressed in the CPIC process as well as in the Business Architecture. The Business Architecture is a dynamic document which identifies core

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business processes. The core business processes are adjusted and targeted based on the strategic goals and objectives of the business.

Question. What specific circumstances existed that required the Department to overlook this committee's concerns about making significant IRM acquisitions prior to completing reengineering, addressing oversight concerns, and developing a department-wide architecture?

Answer. I believe that we have taken positive steps to address the Committee's concerns, and those of our oversight agencies, prior to new IRM acquisitions. The November 1996 moratorium on IT acquisitions is an example. This time-out has been effective in stopping "business as usual" while we devote our energies to completing the required information architecture.

The Secretary has commissioned a high-level USDA team which is now working to create a report to the Secretary, which will be delivered on or about July 9, outlining our plans for effectively completing work on USDA IT management reform, addressing issues of budgeting and legislation, service center implementation, Year 2000, telecommunications and implementation of the Clinger-Cohen Act.

We must continue to provide services to our customers, and be able to accommodate new reporting and processing requirements which are the results of legislation, such as the most recent Farm Bill. While meeting these responsibilities, we continue to look for opportunities for improvements and cost savings through business process analysis and subsequent reengineering.

SERVICE CENTER IMPLEMENTATION

Question. USDA reported in its fiscal year 1998 budget summary that it continues to implement service centers. However, the summary also notes that the number of field office "service centers" is now expected to be less than 2,000 by 1999, as opposed to 2,500 originally planned. How much did USDA spend in fiscal year 1996 to implement new Field Service Centers, what was acquired with these investments, and how many Service Centers were established?

Answer. I will provide the information for the record.

[The information follows:]

Service center implementation fiscal year 1996 obligations

[Dollars in millions]

	<i>Obligations</i>
I. Voice/LAN/WAN:	
A. Voice Equipment	\$13.2
B. Data Equipment	26.2
C. Installation and Training	33.3
Total	<u>72.7</u>
II. IRM support for BPR/I:	
A. Customer Information Profile	0.1
B. Data Management	0.7
Total	<u>0.8</u>
III. Common computing environment (CCE):	
A. Develop/Implement Technical Architecture	0.2
B. Studies/Documentation Needed for 1999 Investment Package	4.0
Total	<u>4.2</u>
Total, above shared items	<u>77.7</u>
IV. Base data acquisition:	
A. Digital Orthophotography	27.5
B. Digitizing Soils Data	2.5
Total	<u>30.0</u>
V. County office consolidations	<u>22.1</u>
VI. SCIT/InfoShare support:	
A. Change Management/Customer Service6

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B. Other	<i>Obligations</i> 2.5
Total	3.1
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Total	132.9

As of December 1996, 2,400 Service Centers had been established.

Question. How much does USDA plan to spend in Fiscal year 1997 and 1998 under each of the agencies' budgets, including CCC funds, to implement new Service Centers?

Answer. I will provide the information.
[The information follows:]

SERVICE CENTER IMPLEMENTATION FUNDING BY SOURCE

[Dollars in thousands]

Agency	1997	1998
Commodity Credit Corporation	\$20,500	\$35,800
Farm Service Agency	9,233	8,120
Natural Resource Conservation Service	33,433	45,170
Rural Development	14,693	5,520
OSEC/InfoShare	3,700	700
Total	81,559	95,310

Question. Provide a detailed breakout of what these funds will be used for in fiscal years 1997 and 1998 for Service Center implementation and what specific technology acquisitions will this include.

Answer. I will provide a table for the record.
[The information follows:]

SERVICE CENTER IMPLEMENTATION INFORMATION TECHNOLOGY ACQUISITIONS

[Dollars in millions]

	1997	1998
I. LAN/WAN/Voice:		
A. Voice Equipment	\$1.0	
B. Data Equipment	2.0	
C. Installation and Training	2.5	
D. Integrated E-Mail	5.0	
E. Satellite Downlinks	5.8	
F. Circuit Upgrades	2.4	\$2.5
G. Maintenance/Operations	0.3	2.6
Total	19.0	5.1
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II. IRM support for BPR/BPI:		
A. Customer Information Profile	0.2	0.1
B. Data Management	1.0	0.7
C. BPR, Training, Analysis, Prototypes	8.0	6.0
Total	9.2	6.8
<hr/>		
III. Common computing environment (CCE):		
A. Develop/Implement Technical Architecture	0.5	0.3
B. Studies/Documentation Needed for 1999 Investment Package	3.0	1.0
C. CCE Demonstration Sites		6.0
D. CCE Installation and Training		2.0

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SERVICE CENTER IMPLEMENTATION INFORMATION TECHNOLOGY ACQUISITIONS—Continued

[Dollars in millions]

	1997	1998
E. Legacy System Conversion		15.0
Total	3.5	24.3
Total, above shared items	31.7	36.2
IV. Base data acquisition:		
A. Digital Orthophotography	10.0	24.0
B. Digitizing Soils Data	10.0	20.0
Total	20.0	44.0
V. County office consolidations	25.2	10.8
VI. Change management/customer service	1.0	3.6
Total estimated expenses	77.9	94.6

CONSOLIDATION OF FUNCTIONS

Question. The President's fiscal year 1998 budget request for USDA notes that the budget assumes a consolidation of certain functions of the Farm Service Agency—FSA—and the Natural Resources Conservation Service—NRCS—at the national headquarters level in 1998, including personnel, IRM, property and public affairs. The summary also notes that a study will be conducted in 1997 by an independent entity to examine the FSA and NRCS for opportunities for further coordinating and reducing costs in these agencies, including alternative means of program delivery, such as centralized servicing for AMTA payments and CCC non-recourse loans, and consolidation of the two agencies' operations. What overall savings does the budget assume from implementing the consolidation of certain FSA and NRCS functions?

Answer. During fiscal year 1998 Budget deliberations, the Department agreed to an independent study to explore opportunities for greater efficiencies in program delivery, including a possible merger of certain functions of FSA and NRCS. However, the fiscal year 1998 Budget does not assume a specific level of savings from any potential consolidation or other changes. The independent study will soon be contracted for by the Department.

Question. How many IRM personnel does FSA and NRCS each have, including a breakout by the headquarters level and field level and what are the associated fiscal year 1998 budget for these?

Answer. For fiscal year 1998, FSA projects that it will have 690 IRM personnel, measured in terms of full-time equivalents, and NRCS projects that it will have 405. The associated costs are \$41,765,000 and \$31,853,000 respectively, broken out as follows:

Agency/location	Staff-years	Cost
NRCS:		
Headquarters	85	\$7,631,000
Field	320	24,222,000
Total	405	31,853,000
FSA:		
Headquarters	87	5,883,000
Field	603	35,882,000
Total	690	41,765,000

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Question. What specific personnel, IRM, property, and public affairs functions will be consolidated, what are the expected timeframes for completing this, and what impact will this have on the level of staff and overall costs on each of these functions for the two agencies?

Answer. The Service Center partner agencies—FSA, NRCS and Rural Development—are conducting business process reengineering for customer interface, customer service, geospatial information services and administrative management. The interagency teams will deliver recommendations on new ways to do business in these areas which provide common streamlines processes and meet all partner agency requirements in a common computing environment. The business case for IT investments based on business requirements is being developed to support an investment proposal in the fiscal year 1999 budget cycle. Actual implementation and full deployment of consolidated functions will stretch into the year 2001 and beyond.

In parallel with the BPR activity, the Deputy Secretary, in a February 10, 1997 memorandum, charged the Service Center agencies with developing and implementing common administrative policies and procedures with a goal of October 1, 1997 to implement significant changes in functional areas “as a first step toward full integration and consolidation of administrative services.” He also noted that the next steps for further consolidation should be based on outcomes of the BPR projects and the recommendations of the independent study.

Question. What is the status of the independent study, including its estimated total cost, when the study was initiated, what is the scope of the study, who is doing the study and when will it be completed?

Answer. The attached Memorandum from the Secretary outlines the status of this study.

[The information follows:]

MEMORANDUM FROM THE SECRETARY

May 21, 1997.

To: The Subcabinet

Subject: Study of County-Based Agencies Proposed in the Fiscal Year 1998 Budget

The fiscal year 1998 President’s Budget requires the Department to conduct a study of its county-based agencies to examine options for streamlining program delivery, administrative support at all levels of the agencies, and identifying the optimum number of service centers.

I have deferred the start of the study expecting that a forum with key members of Congress would produce guidance for designing the study. Unfortunately, we have been unable to find a suitable date to accommodate the invitees and I have decided that the Department cannot wait any longer and that we need to move ahead with the study.

PROJECT MANAGER

Dr. Susan Offutt, Administrator of the Economic Research Service, will be project manager for the study.

MANAGEMENT STRUCTURE

To assist Dr. Offutt with policy advice, I am establishing a Policy Oversight Board which will be chaired by the Deputy Secretary. Members will include Dallas Smith, Acting Under Secretary for Farm and Foreign Agricultural Services; Tom Hebert, Deputy Under Secretary for Natural Resources and Environment; and Inga Smulkstys, Deputy Under Secretary for Rural Development.

I am directing this group to develop an outline and project statement as soon as possible. Departmental staff organizations will provide support to the policy oversight board and Dr. Offutt as needed. Dr. Offutt and the board will brief the Office of Management and Budget and staff of the House and Senate Agriculture and Appropriations Committees on the status of the study periodically.

SCOPE OF STUDY

The study will be performed by an independent private sector contractor with appropriate expertise in analyzing public sector organizational structure and service delivery. The study will examine alternatives for coordination or consolidation of Farm Service Agency, Natural Resources Conservation Service, Rural Development, and Risk Management Agency activities and the design of a delivery system for the services and products of these agencies that strikes an appropriate balance between the cost to taxpayers of its operation and the effectiveness of the provision of assist-

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ance to targeted individuals and communities. The study of the convergence of administrative systems, the Farm Service Agency State Directors' review, the Service Center Implementation Team activities, and the Civil Rights Action Team review, will be coordinated with this larger, more comprehensive effort. Our contractor will be required to seek input from the county-based agencies' customers, conservation districts, farm organizations, rural development organizations, insurance groups, and others.

POLICY ASSUMPTIONS

The President's fiscal year 1998 Budget provides the funding baseline for these organizations during the life of the budget agreement between the Administration and the Congress. A review of expected workload and anticipated dollars and staffing resources will be conducted to determine if the anticipated workload can be accomplished within available resources.

The study will examine a scenario assuming continuation of the farm programs under the 1996 Farm Bill after 2002 and one scenario with farm payments ending in 2002. It should address the implications of the uncertainty over continuation of payments for any recommendations for field office change.

The study will assume no change from the existing legislative authorization for conservation, farm credit, risk management, rural development and other major programs within the scope of the study.

The study will include a comprehensive review of the involved agencies at all levels.

The study will catalogue and evaluate the range of services provided and functions performed at field offices and analyze such questions as the extent to which there is duplication or complementarity and whether there are opportunities for consolidation or streamlining. At the same time, the analysis must consider and identify the effect of any change to field office operations on the timeliness and quality of service to clients.

TIMING

If the study is to influence the final decisionmaking for the fiscal year 1999 budget, it should be structured, if feasible, to provide some preliminary observations in late fall 1997. A final product will be produced as soon as possible thereafter, recognizing that a contract is not likely to be in place before mid-summer 1997.

FUNDING

No funding has been specifically provided for the study in fiscal year 1997, nor is any funding proposed in the fiscal year 1998 budget. Therefore, we will use available funds. Since the study involves multiple agencies funding will be drawn from all of the key agencies affected. Since many, but not all of the programs delivered by the Farm Service Agency and the Natural Resources Conservation Service are funded by the Commodity Credit Corporation, it may be possible to consider use of Commodity Credit Corporation funds for a portion of the study.

I have asked Dr. Offutt and the Policy Oversight Board to provide a progress briefing to the Subcabinet once a month between now and the completion of the study. If you have any suggestions concerning the conduct of the study, please advise Dr. Offutt as soon as possible.

Question. What does USDA currently spend annually for servicing AMTA payments and CCC non-recourse loans on a decentralized basis? What does USDA estimate it would cost to perform these servicing functions centrally?

Answer. The existing administrative workload reporting system captures workdays and related costs on a broad functional basis for the currently decentralized structure and does not, for example, identify AMTA payments individually and all related servicing. To derive such an estimate would require many programmatic assumptions and would be a major endeavor. FSA is currently working with a contractor to compare and contrast FSA/CCC's decentralized payment process and related servicing to other various alternative processes, including a centralized methodology. This study was requested by OMB and is expected to be completed by mid-September. The servicing related costs for these processes are being projected as part of the study. Also, the study is considering other related legislative requirements such as Electronic Funds Transfers and offset requirements created by the Debt Collection Improvement Act of 1996.

We have only the check processing and related costs readily available. Based on the most recent 5-year average, the Farm Service Agency currently issues about 8.36 million CCC checks annually for all FSA program payments on a decentralized basis. These checks cost 62.89 cents per check to process. This processing cost in-

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cludes all overhead costs including equipment service costs, systems analysis/development, blank check printing, annual photocopying, blank stock mailing costs, paper, and personnel costs associated with printing, signing, and verifying checks. Therefore, it costs about \$5.26 million annually to issue the 8.36 million checks on a decentralized basis. We do not have a check volume figure which covers only the portion of checks issued for AMTA payments and commodity loans, but it would be the same per check average cost.

With regard to the estimated cost of processing payments in a centralized manner, we have hired a private contractor to conduct a study of the existing check writing processes and to make recommendations for how checks can best be processed in the future. Since centralized processing is one of the viable alternatives for the future environment, a cost estimate will be a part of that study. We expect the study to be completed in mid-summer, at which time we can provide you with those estimates.

FIELD LOCATIONS

Question. In September 1995, GAO found that USDA paid thousands of dollars for telecommunications services for a USDA field office that closed over a year earlier. USDA reported on its Fiscal year 1998 Budget Summary that the Department has moved or closed about 1,300 field locations since December 1994 for the farm service agencies and has closed additional field offices for several other USDA agencies with field structures. What specific actions has USDA taken to ensure that telecommunications services for the 1,300 field locations the Department reported it closed since December 1994 have terminated telecommunications and other services at these locations?

Answer. As the result of concerns in this area, the Department amended its Departmental Regulation "Telecommunications Policy" (DR 3300-1) on March 20, 1996 and distributed it to all USDA agencies and staff offices. This policy strengthens the requirement for the agencies to: "Eliminate redundant or uneconomical services, especially in office closures, relocations, or consolidations to ensure: (a) All unneeded telecommunications services are terminated and accounts are closed. (b) Telecommunications equipment is properly accounted for and used where it is practical and cost beneficial." (Reference: DR 3300-1, Appendix G, Section 4 Responsibilities, Paragraph C (3)).

This policy establishes specific procedures to ensure that USDA agencies manage telecommunications services more efficiently.

In October 1995 the CFO issued a bulletin and special report of Active Telephone System Accounts to all agencies. The bulletin highlighted the GAO's finding that, in several cases, USDA was paying for outdated equipment and for services no longer being provided.

Agencies were instructed to thoroughly review all accounts for which they are responsible and to: (1) notify the National Finance Center if an account was no longer active and/or if a bill for collection should be issued; and (2) notify local telephone companies to stop billing for these active accounts.

In addition to the CFO memorandum, the Secretary and Assistant Secretary for Administration have issued letters to the Under Secretaries and the Assistant Secretaries with specific instructions to work with OCIO to improve telecommunications management activities. Each agency has been directed to work OCIO and OCFO to review all current telephone service accounts. Copies of telephone account invoices were sent to each agency. Through May 22, 1997, the audit of the invoices has been completed for 84.6 percent of the 25,021 accounts with an estimated savings of \$258,000. The review is scheduled for completion by October 1, 1997.

Question. How is the Department verifying that it is not paying for services to locations it has closed?

Answer. Departmental Telecommunications Policy specialists have established procedures for the department as a whole to verify that services are terminated whenever offices are closed or consolidated. The USDA Service Center Implementation Team—SCIT—has developed and implemented specific procedures, in the form of a checklist, for use in closing of field offices to establish USDA Service Centers. SCIT telecommunications specialists conduct follow up inquiries to make sure that USDA is not paying for unneeded services.

STAFF REDUCTIONS

Question. USDA reported in its Fiscal year 1998 Budget Summary that the Department's Federal employment will be reduced by over 16,400. In light of this reduction of staff, we assume that most of these employees used telecommunications equipment and other information technology, such as computers. What analysis has

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the Department done to identify the surplus of equipment that should exist with the reduction in staff and what does this analysis show?

Answer. As an agency reduces its staff, excess personal property will be redistributed within the agency to replace outdated or obsolete equipment on a continual basis. Once an agency has accomplished this, any excess equipment is reported through USDA's Departmental system for redistribution throughout USDA. Until this is completed, no in-depth analysis can be made of what to do with excess property. However, within USDA our normal procedure would be to transfer excess property to other federal or state agencies using existing legislation.

Question. What is the Department doing to cost-effectively use such equipment and relocate it, where feasible, to other field offices or locations anywhere across the Department where there is a need for such equipment rather than purchasing new equipment?

Answer. USDA has extensive programs at the headquarters and national level for the reutilization of excess personal property. All excess personal property in the Washington, D.C. metropolitan area is reported and transferred to our Centralized Excess Property Operation located in Landover, Maryland for redistribution within USDA. Property located in field locations is reported through the departmental Property Management Information System—PMIS—to the Departmental Excess Personal Property Coordinator for redistribution. The property is then available for redistribution by using either the on line PMIS or the Internet. For agencies in remote locations which may not have systems available for on-line screening a catalog is published and distributed.

OFFICE OF COMMUNICATIONS

PREPARED STATEMENT OF TOM AMONTREE, DIRECTOR OF COMMUNICATIONS

Mr. Chairman and members of the Subcommittee, I am pleased to discuss the fiscal year 1998 request for the Department of Agriculture's Office of Communications.

The Office of Communications leads and coordinates the carrying out of the mission described in the organic act establishing the Department of Agriculture in 1862: "To acquire and to diffuse among people of the United States useful information on subjects connected with agriculture in the most general and comprehensive sense of that word . . ."

The Office of Communications informs the general American public about the programs, functions, and initiatives of the Department of Agriculture: Disseminates both general and technical information to the customers and constituency groups of the Department who depend on the Department's services for their well-being, coordinates the communications activities of USDA component agencies and provides leadership for internal and external communications. The Office of Communications has been streamlined through restructuring and reduction in staff years. To coordinate the communications of the Department's 7 program mission areas, 19 program agencies and various staff offices, the Office of Communications has 122 staff years in fiscal year 1998—that's 28 staff years less than fiscal year 1993.

To carry out its goal of informing the public about USDA policies, programs, and initiatives with a reduced communications staff, the Office of Communications is increasing its use of the latest and most efficient communications technology, methods and standards. From use of the world wide web on the Internet to radio, television and teleconference facilities, thousands of people who depend on USDA's services for their livelihood and/or their personal well-being are informed daily.

Scope and dimensions of communications activities are integrated into USDA's mission of enhancing the quality of life for American people by promoting a healthy, accessible and affordable food supply; caring for agricultural, forest and range lands; supporting sound development of rural communities; providing economic opportunities; expanding global markets for agricultural and forest products and services; and providing efficient and effective government service in a fair and equitable manner.

To support the Department's strategic plan, the Office of Communications will emphasize these general goals in its 5-year strategic plan: Increase knowledge of the general public about USDA policies, programs and initiatives through integration of communications management with USDA policy and program management; improve access to and dissemination of USDA information to news media, constituent groups and individual customers using latest and most efficient communications technology, methods and standards; improve communications with USDA employees by leading and coordinating internal USDA communications; develop an efficient and effective, results-oriented, public affairs community within USDA that provides

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high-quality customer service; and foster civil rights and diversity throughout USDA's public affairs community and its communications products and services.

In the first goal, the Office of Communications will continue to take an active part in policy and program management discussions at the highest levels to integrate communications components into decisions for action. After defining the audience for each major USDA policy and program initiative, the Office of Communications will coordinate the public communications component of the initiatives. We will continue to provide centralized operations for production, review and distribution of USDA messages to its customers and the general public. We will monitor and evaluate the results of communications to the public about USDA programs.

In carrying out the second goal, the Office of Communications will continue to acquire and instruct staff to use the most effective and efficient communications technology, methods and standards in carrying out communications plans. We will use among USDA mission areas the most effective and efficient communications services and methods in getting USDA information to the public. We will evaluate results of using this technology and of using these services and methods.

The Department values its employees as good Government "ambassadors" who need to be kept informed. The Office of Communications intends to improve communications with USDA employees, especially those away from headquarters. We will help employees understand USDA's general goals and policy priorities, and to be more familiar with USDA programs and services. We will help employees understand new initiatives, especially cross-cutting ones, and how they relate to each USDA employee's specific job duties. We will provide means to inform and train USDA employees both at headquarters and in the field.

In relation to the Government Performance and Results Act, the Office of Communications will update USDA regulations and guidelines for communications; plan and conduct regular information exchange and training sessions for USDA communications managers, specialists, and support staffs in use of communications technologies and processes to enhance service to the public; foster accountability for communications management performance throughout USDA; and reassess its own organization and if deemed necessary, restructure into a more efficient, effective, centralized communications work force.

The Office of Communications will provide equal opportunity for employment and promote an atmosphere that fosters valuing individual differences. We will continue to provide equal opportunity for contracting goods and services. We will increase availability of USDA information to under-served communities and geographic areas to ensure equal opportunity in USDA's outreach efforts. We will continue to develop information products that are universally accessible.

The Office of Communications' accomplishments the past year included communications coordination and support for: the implementation of the historic 1996 Farm Bill; the modernization of the 90-year-old meat and poultry inspection system; the release of updated dietary guidelines for Americans; and the expansion of the Water 2000 and other rural development programs.

The Office of Communications' staff also provided information support for the agricultural concentration study and follow-up actions, the agricultural export trade expansion, the launch of new risk management tools for farmers, the inauguration of a comprehensive school nutrition education program, the creation of new consumer interest in farmers' markets, and the public benefits of USDA-sponsored research.

FISCAL YEAR 1998 BUDGET REQUEST

The Office of Communications is requesting a budget of \$8,279,000. This is an increase of \$141,000 over our fiscal year 1997 current estimate. This modest increase covers \$106,000 for pay costs, and includes \$35,000 for an initiative to provide Outreach to Underserved Groups. The additional resources will help OC fulfill the information distribution mission of USDA by communicating to the public through media and constituent organizations and by providing a coordinated program for such under-served client populations as Native Americans, Hispanics and Asian Americans. The increase would be used to conduct an initial survey to identify the level of knowledge of USDA services and the best information channels to reach underserved groups. This initiative will allow USDA to fulfill its goal of communicating to all stakeholders by reaching particular segments of the public who have been underserved.

This concludes my statement, Mr. Chairman. I will be pleased to respond to any questions.

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OFFICE OF THE GENERAL COUNSEL

PREPARED STATEMENT OF JAMES S. GILLILAND, GENERAL COUNSEL

INTRODUCTION

Mr. Chairman and members of the Subcommittee, I am pleased to have this opportunity to provide you with an overview of the Office of the General Counsel, to include some of the current activities and issues facing the Department. I would also like to present our appropriation request for fiscal year 1998.

MISSION

The Office of the General Counsel (OGC) is the national law office serving the Department of Agriculture. As a free standing USDA agency, OGC provides legal advice and services to the Secretary of Agriculture and other officials of the Department of Agriculture with respect to all USDA programs and activities.

The mission of OGC is to determine legal policy, provide legal services, and direct the performance of all legal work for the Department throughout its Washington and field locations.

ORGANIZATION

The headquarters for OGC is located in Washington, D.C. The Office is directed by a General Counsel, a Deputy General Counsel, five Associate General Counsel, 11 Assistant General Counsel, and a Director for Administration and Resource Management. Our field structure consists of five regional offices, each headed by a Regional Attorney, and 13 branch offices.

Our full staffing levels are approximately 247 attorneys and 118 support staff in the Washington, D.C. headquarters and the 18 field locations. Approximately half of our personnel are located in the field.

CURRENT ACTIVITIES AND ISSUES

There are several areas of our current work that I would like to highlight to demonstrate how OGC serves the Department.

During the past year, OGC has been engaged in supporting the Foreign Agricultural Service (FAS) in a number of diverse areas. Foremost on the international agenda since the Uruguay Round Agreement came into force has been implementation of commitments in the area of sanitary and phytosanitary ("SPS") measures. The first formal challenges to unfair practices under the World Trade Organization (WTO) SPS Agreement were brought by the United States this year against the European Union's (EU) continued import ban on meat produced with the use of growth-promotant hormones. Consultations were held early in the year and formal dispute resolution was instituted requiring full briefing of the issues and several formal panel meetings this past summer and fall.

The United States has also initiated WTO consultations during the past year with Korea in two disputes involving Korea's system of shelf-life rules and its new inspection regulations. As a result of substantial interagency work on the shelf-life issues, the United States has been able to convince Korea to institute changes in that system which will liberalize market conditions in Korea and, if fully implemented, should permit the United States and Korea to avoid formal dispute resolution. Similarly in the case of Korea's inspection system, we have done substantial technical and legal groundwork to support continued negotiations with Korea on these issues.

During the past year, we have seen progress towards an equivalency agreement with the EU on veterinary inspection matters. This negotiation has been long and difficult and represents a first attempt by WTO parties to address the novel question of how to recognize the equivalency of differing technical systems. OGC has been instrumental in preparing the text of this agreement as well as providing legal advice with respect to the form and meaning of numerous and complex annexes.

OGC has provided a significant amount of advice to Departmental officials concerning the implementation of the commodity and conservation program provisions of the Federal Agriculture Improvement and Reform Act of 1996. In this regard, OGC has provided a significant amount of advice concerning the promulgation of the proposed and final rules for the Conservation Reserve Program (CRP), including the provision of advice with respect to the review of the thousands of comments received in response to the proposed rule. In addition to the review of these rules, this effort involved the review of numerous decision memoranda, the CRP contract, and related documents.

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OGC attorneys are substantially involved in providing legal services related to the continuing changes in the Department's crop insurance program, especially the review of private insurance company initiatives including crop revenue coverage; non-procurement suspension and debarment issues; and the protection of the public interest in regards to food stamp fraud and the development of the Department's plans for the extension of Food Stamp Program electronic benefit transfer systems.

The enactment of welfare reform legislation in 1996 has raised many legal issues. Already, the implementation of the alien provisions is generating substantial controversy and threatened litigation. OGC attorneys are also working closely with the Food and Consumer Service in connection with state efforts to privatize welfare programs and to enhance food stamp program efficiency and integrity through implementation of electronic benefit transfer systems. Debarment and suspension activities continue with OGC attorneys assisting FCS in taking actions to protect the federal government and the public with respect to over 150 dairy companies and individuals convicted of bid rigging on school milk contracts.

In the marketing and regulatory area, we filed a trade practices enforcement case last year against the country's largest meat packer alleging that the packer has given an undue or unreasonable preference to certain feedlots resulting in disadvantages for others. The trial began on January 29, 1997. We have also provided assistance and counsel to the Secretary regarding the establishment and implementation of the Advisory Committee on Concentration in Agriculture and the Department's responses to the Committee's recommendations.

In the food safety area, we worked very closely with the Food Safety and Inspection Service (FSIS) on the development of the Pathogen Reduction/Hazard Analysis and Critical Control Points (HACCP) final rule, which was published on July 25, 1996. We have also provided legal assistance to FSIS in connection with the implementation of the final rule, particularly with regard to the Sanitation Standard Operating Procedures and *E. coli* testing requirements. We are currently working with FSIS on technical amendments to the HACCP rule. We continue to provide legal support to FSIS as the agency develops initiatives designed to make the meat and poultry regulations more compatible with HACCP, eliminate redundant and obsolete regulations, allow more productive use of scarce agency resources, and make regulations less burdensome and easier to understand and meet.

OGC worked closely with the Animal and Plant Health Inspection Service (APHIS) on the preparation of the final rule that established a systems approach permitting the importation of fresh Haas avocados from Mexico into 19 northeastern states. We have also worked with APHIS on sanitary and phytosanitary issues that have risen under GATT and NAFTA.

We provided extensive legal support to APHIS in connection with its program to control Karnal bunt, a fungal disease of wheat. We are also defending a lawsuit brought by producers and handlers of wheat in Arizona challenging the Department's Karnal bunt regulations.

There continue to be very significant developments in connection with litigation challenging generic advertising programs under both marketing orders and free-standing research and promotion programs. Most significantly, in *Wileman Bros. et al. v. Glickman*, the Ninth Circuit's decision holding the advertising program under the California peach and nectarine marketing orders unconstitutional on First Amendment grounds has been argued and submitted to the Supreme Court for decision. In another important case, *Goetz v. Glickman*, the plaintiff appellants are appealing an adverse decision which rejected a First Amendment challenge to the beef advertising program. In addition, cases challenging the mushroom, milk and fresh cut flower advertising programs were filed against the Department. Dairy issues, including consolidation of milk marketing orders and the Northeast Interstate Dairy Compact, also required extensive legal assistance.

In the area of animal welfare, we coordinated the seizure and movement of certain dolphins to ensure their safety and well-being, provided legal services in a dispute between a university and a former employee regarding animal research activities, and took separate actions against a university and a well known research facility to require that they provide humane living conditions for primates used in research.

We provide legal services to agencies which manage some of America's largest lending portfolios. Overall, USDA extends credit of nearly \$24 billion through its various lending programs. We oversee such legal work with a far smaller staff than a comparable private organization would use. The ongoing implementation of centralized processing (DLOS) for Rural Housing loans uses substantial legal resources. OGC continues to be heavily involved in debt collection and foreclosure work with many cases going back to the emergency loan programs of the 1970's and 1980's.

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The Secretary is committed to regulatory reform. We continue to work with Department officials to implement the President's regulatory reform package. This is a significant undertaking as we work with agencies throughout USDA to reduce regulatory burden, eliminate obsolete or unnecessary regulatory requirements, and streamline regulation, particularly in the areas of rural, farm and utility lending.

We have been required to devote considerable resources to the Rural Utilities Service (RUS) and its electric borrowers as they experience the effects of and respond to the rapid deregulatory changes in the electric industry. We are working closely with RUS and DOJ on the involved and time-consuming problems of several borrowers, including several bankruptcies and financial workouts that have raised complex new issues of law and policy.

A number of issues and concerns have arisen in the RUS program with the passage of the Telecommunications Act of 1996. The Act is revolutionizing the transmission of information in the United States as it eliminates barriers to market entry and expands competition in the telephone and cable TV industries. The Act encourages universal service but RUS, charged with financing telecommunications services throughout rural America, faces new questions of loan purposes and assuring loan repayment.

In the natural resources area, we have been involved in a number of extremely significant undertakings concerning national forest management and soil conservation programs. We have provided assistance nationally to the Natural Resources Conservation Service under the Wetlands Reserve Program through the acquisition of voluntary wetland easements.

Management of our National Forests is a subject of intense debate and litigation, with a great deal of legal work generated by the impact of new scientific information on ongoing Forest Service projects and commitments. Such legal challenges involve the President's Northwest Forest Plan, Forest Plan amendments to protect the Mexican Spotted Owl in the Southwest as well as numerous other species, fisheries protection in the intermountain West and the Migratory Bird Treaty Act in various places.

Further, we are defending against numerous timber sale claims arising from legally created delays and contract modifications to protect the habitat of endangered species. We also are defending challenges in several places in the West by local governments and individuals under the so called "County Supremacy" movement disputing federal ownership or jurisdiction over public lands.

We have also devoted substantial resources to other legislative and regulatory initiatives, such as land exchanges, grazing reform, Forest Planning reform, reauthorization of the Endangered Species Act, the Safe Drinking Water Act and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). OGC also provided the Forest Service with support in the administration of the National Forest lands as they are affected by the complex statutes related to mineral exploration.

In addition, we regularly provide advice on compliance and litigation arising under the pollution control laws. Most frequently, these issues involve abandoned and inactive mines and landfills on federal lands, the use and storage of agricultural chemicals, and management of hazardous waste at agricultural research facilities. We have worked with other federal resource management agencies on implementation of new executive authority under CERCLA to order cleanup of hazardous substances affecting federal resources.

In the general law area, OGC has assisted the Civil Rights Office (CR) in its effort to promulgate comprehensive civil rights procedures and regulations, and the Office of Operations (OO) in processing compensatory damage decisions in civil rights complaints brought by USDA employees. We anticipate an increase in OGC involvement in assisting CR in future endeavors, as well as assisting OO in processing and adjudicating civil rights complaints already brought by both employees and applicants for employment in the Department, as well as private individuals who allege violation of their civil rights in programs administered by the Department. Based on recommendations by the Civil Rights Action Team, OGC is in the process of establishing a civil rights division, dedicated to providing legal counsel to the Department and agency officials on civil rights issues. This endeavor has the full support of the Secretary.

OGC anticipates an increased demand for legal services to client agencies to advise them as to the legality of their downsizing efforts; to provide representation of USDA agencies, upon request, in actions brought before the Equal Employment Opportunity Commission and the Merit Systems Protection Board; and to provide legal support in the defense of any action brought in Federal court as the result of any downsizing.

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We continue to provide considerable assistance to the National Appeals Division (NAD) with ongoing questions and litigation arising regarding its authority under the Federal Crop Insurance Reform and Department of Agriculture Reorganization Act of 1994. Additionally, numerous changes in the farm credit area made by the Federal Agriculture Improvement and Reform Act of 1996 have generated questions regarding the effect of such changes on pending NAD appeals and the appealability of agency decisions mandated by the provisions of that Act. We have worked a great deal on a case now on appeal in the Eighth Circuit which should resolve issues concerning the applicability of the Administrative Procedure Act to NAD proceedings and the allowance of legal fees under the Equal Access to Justice Act for such proceedings.

With regard to the procurement of property and services, the Clinger-Cohen Act of 1996 mandated many changes that address source selection procedures in negotiated procurements; the acquisition of commercial items; and the acquisition, use, and disposal of information technology by the Federal Government. Substantial resources in the general law area will be devoted to assist Department implementation of the changes mandated by this Act.

We also expect to see an increase in procurement protest-related work in the general law area as a result of the recent expansion of the jurisdiction of the Court of Federal Claims that allows it to hear post-award procurement protests. An initial decision of the court indicates that such protests will require complex record compilation for review. Enhanced legal representation of USDA agencies in protests before the General Accounting Office (GAO) also may be necessary to ensure that the position of the agency is set forth fully in the record in preparation for a potential secondary protest to the Court of Federal Claims if the GAO protest is denied.

We continue to provide legislative drafting and related assistance to the Department and the Congress on major legislative activities that involve the Department. Recently, we have provided assistance in the development of legislation to reauthorize the Department's research activities.

All these comments hardly touch upon the dozens of daily issues that come before the legal office of a Department of over 100,000 employees administering programs in an extremely wide range of areas.

FISCAL YEAR 1998 BUDGET REQUEST

For fiscal year 1998, OGC is requesting \$29,449,000 in direct appropriations. This request represents an increase of \$1,700,000 over the fiscal year 1997 appropriation. Of this amount, \$351,000 is for the anticipated pay raise, which is needed to maintain staff so that existing levels of mission efforts may continue. OGC is requesting \$1,149,000 to maintain staff and provide pre-decisional legal work. This critically important increase is needed to fully fund current staffing needs and to keep pace with the continued high volume of legal work. This requested increase must be viewed against the background of staff reductions which occurred during fiscal years 1994, 1995 and 1996, which have left OGC with a number of areas where staff was insufficient to adequately meet the demands for legal services generated by the Department. OGC has been able to recruit replacement attorneys for several of these key positions, although even with the requested increase, OGC will be able to support a projected staffing level of only 367, which is significantly below the fiscal year 1994 level of 398.

In order to ensure that agencies of the Department receive adequate legal advice, it is important that OGC attorneys be involved in decision making before decisions have been reached. By doing so, legal issues can be identified and addressed at an early stage. OGC can participate in Department decision making to an adequate degree only if there are adequate OGC resources available to address the press of daily business and litigation already filed, as well as ongoing decision making within the Department. Placing OGC attorneys in the decision making process helps ensure that Departmental decisions comply with applicable legal requirements, litigation is avoided whenever possible, and the government's chance of successfully defending litigation filed against the Department is substantially improved. Ensuring that adequate OGC staff are available to provide that pre-decisional legal advice garners significant savings in the avoidance of costly litigation expenses.

For example, it is absolutely necessary that we maintain current staffing levels in order to provide legal advice to the Food and Consumer Service, which administers the Food Stamp, School Lunch and Child Nutrition Programs. The food assistance programs are undergoing major changes as a result of welfare reform. Legal assistance must also be maintained for the Grain Inspection, Packers and Stockyards Administration, which is currently considering implementation of actions to address the issue of concentration in the meat packing industry.

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OGC must likewise maintain legal support to the Food Safety and Inspection Service during implementation of the Hazard Analysis and Critical Control Point (HACCP) regulations. Staff must be maintained in the General Law area, which continues to receive a steadily increasing number of requests for assistance in legal matters related to contracts and cooperative agreements, torts, FOIA and appropriation issues.

In addition to these ongoing activities, we anticipate a number of developments that will generate additional demands for legal services related to trade issues, agency downsizing efforts, efforts to amend the National Forest Management Act and legal work associated with amendment of Forest Plans.

OGC has made substantial improvements in the ADP computing environment, upgrading both its hardware and software as well as making substantial improvements to the OGC communication network. In order to continue improvements and train staff to make full utilization of available computer resources, additional resources are necessary.

Also included in this request, is a shift of \$200,000 from Departmental Administration (DA) to OGC to aid the Office of Operations (OO) in processing and adjudicating civil rights complaints brought by both employees and applicants for employment in the Department, as well as private individuals who allege violation of their civil rights in programs administered by the Department. In fiscal year 1997, the Congress appropriated an additional \$1.5 million to DA to facilitate the processing and adjudication of civil rights complaints. However, as the work has developed, the Secretary has determined that more legal resources should be employed to address the pending cases and assist in those now in development.

CLOSING

That concludes my statement, Mr. Chairman. We appreciate the support this Subcommittee has given us in the past. Thank you.

OFFICE OF INSPECTOR GENERAL

PREPARED STATEMENT OF ROGER C. VIADERO, INSPECTOR GENERAL

Good afternoon, Mr. Chairman and members of the Committee. I am pleased to have this opportunity to visit with you today to discuss the activities of the Office of Inspector General (OIG) and to provide you with information on our audits and investigations of some of the major programs and operations of the U.S. Department of Agriculture (USDA).

Before I begin, I would like to introduce the members of my staff who are here with me today. James Ebbitt, Assistant Inspector General for Audit; Craig Beauchamp, Assistant Inspector General for Investigations; and Del Thornsby, Director of our Resources Management Division.

I want to thank the Committee for the support it has shown me and the agency during the nearly 2½ years since my appointment as Inspector General. We have tried to work closely with you, and I hope that we have been able to address some of your concerns.

OIG's mission is to perform audits and investigations of the Department's more than 300 programs and operations, recommend policies and actions to promote economy and efficiency, and prevent and detect fraud, waste, and mismanagement in these programs and operations. We keep you and the Secretary informed about problems and deficiencies relating to the administration of the Department's programs and operations and report criminal violations to the U.S. Department of Justice (DOJ). We have a diverse staff of auditors, criminal investigators, and other personnel in offices throughout the country to carry out these activities.

I am proud to say that in fiscal year 1996, we continued to more than pay our own way. In the audit arena, we issued 282 audit reports and obtained management's agreement on 1,627 recommendations. Our audits resulted in questioned costs of \$1.5 billion. Management also agreed, as a result of our audit work, to recover \$11.4 million and put \$264.7 million to better use. Additionally, our investigative staff completed 956 investigations and obtained 738 convictions. Investigations also resulted in \$71.5 million in fines, restitutions, and other recoveries and penalties during the year.

Still, our auditors and investigators can continue to recover and save money for the taxpayers only if they have the tools needed to perform their duties. For several years, we have been required to absorb increases in personnel costs, which has forced us to limit our replacement hiring and has extensively limited the funding we have available for other necessary items such as travel and specialized law en-

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forcement equipment. For example, in January 1993, we had 875 employees on board. Now we have only 745—130 less than 4 years ago. At this level, we are simply able to deal with crisis issues needing immediate audit and investigative attention. Many critical issues, including agency concerns, must be put on hold until staff can be made available from current assignments which are already backlogged. This is especially disconcerting in the investigative arena where it is critical to address issues as quickly as they are brought to our attention. For instance, we currently have a backlog of about 1,400 cases which we have had to decline during the past year, mostly because we do not have the staff to do the work.

Adequate funding and staffing for our office makes good sense because we help create a Government that works better and produces positive results. While I recognize that these are difficult budget times and every agency must do more with less, I believe OIG cannot continue to provide sufficient service and assistance to you, the Congress, and to USDA agencies without being provided adequate resources, and I request that our proposed funding level be approved. I believe that resources allocated to OIG are very cost-effective in view of the money we save for the taxpayers.

Before I move to specific audit and investigative activities, I would like to update the Committee on our progress in implementing the requirements of the Government Performance and Results Act (GPRA) and our new forfeiture authority.

We have made significant progress in implementing GPRA in OIG. We have prepared a 5-Year Strategic Plan that describes our mission and sets forth our general goals and objectives through fiscal year 2002. This year, we are preparing our first Annual Performance Plan under GPRA which will contain specific performance goals and objectives for a fiscal year.

In order to prepare the 5-Year Strategic Plan and the Annual Performance Plan, we consulted with management officials from USDA agencies, held focus group meetings, and used several survey instruments. We have also gotten input from your committee, Mr. Chairman, as well as from the other agricultural oversight committees. These initiatives helped us gain a more thorough knowledge of issues critical to the Department and a better understanding of the specific needs of our customers and shareholders. We are also developing performance measures to assess our progress in achieving our goals and objectives under these plans so that we might make adjustments as appropriate to maximize our effectiveness.

We also use a strategic planning process to determine where to specifically focus our resources. This process dovetails with the strategic plans required by GPRA and begins with the construction of profiles of all USDA agencies and major functional areas. We use these profiles to help us review the Department's programs to determine where large dollar losses could occur or where public health and safety could be affected. We also consider such issues as new or changed legislation or regulatory requirements, prior audit and investigative findings, suggestions provided by departmental officials, and fraud in departmental programs. With this approach in mind, we hold planning meetings to determine how best to allocate our resources so that we may perform work in areas that impact the most critical issues and priorities affecting the Department.

During the year, we continued to work closely with agency officials to address key issues and to expand our cooperation with other Federal, State, and local law enforcement and audit agencies to broaden the impact of our work. Our achievements would not be possible without the actions of the Department's program managers who have worked closely with us in carrying out our mission. Working together, our staffs identified program weaknesses and program violators. Capitalizing on the staffs' respective expertise, we created solutions for positive action.

In fiscal year 1997, we are focusing our audit efforts on the Department's financial accounting systems, farm credit programs and civil rights, implementation and compliance with the Farm Bill, and the Food Stamp Program including its Electronic Benefits Transfer project. Our investigative priorities include the timely and thorough investigation of threats to the health and safety of the public, employee integrity issues, and fraud in the Department's loan, regulatory, and benefit programs.

With the Committee's support, we are now authorized to receive proceeds from forfeiture actions arising from our investigations. During this past year, all of our special agents received specialized training on this new law enforcement tool and how it could be used. Extensive administrative control systems were established to monitor and track forfeiture actions and any proceeds identified to be provided to the Government. These are now all in place and operational. While over \$10 million has been identified for possible forfeiture to the Government as a result of our investigative actions since OIG was provided the authority in November 1995, to date, OIG has not received any funds from these proposed forfeitures. We are continuing

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to work with the Department, the Office of Management and Budget, and the Departments of Treasury and Justice to ensure OIG receives its appropriate share of proceeds from these proposed forfeited assets as approved by you.

I would also like to mention that in recognition of USDA OIG'S standing as a Federal law enforcement agency, we were the only OIG requested to provide special agents to assist in providing security at the summer Olympics this past year in Atlanta. Sixty OIG agents worked on this special security assignment in Atlanta for approximately 1 month under the auspices of DOJ at a cost to OIG of nearly \$700,000 of which DOJ reimbursed us \$256,000—a \$444,000 shortfall we have had to absorb from other budget areas.

Mr. Chairman, at this time, I would like to highlight some of our audit and investigation activities.

AUDIT AND INVESTIGATION ACTIVITIES—ENTITLEMENT PROGRAMS

FOOD AND CONSUMER SERVICE (FCS)

Food Stamp Program (FSP)

The Food Stamp Program represents almost 45 percent of the Department's budget for fiscal year 1997. Approximately \$26.4 billion will be available for issuance in food stamps. This is the largest program activity in the Department and, due to the ease with which food stamps may be illegally exchanged or used as a secondary currency, it is the program most vulnerable to fraud, waste, and abuse. With about 1 in 10 Americans and over 190,000 retail stores participating in the Program, OIG must continue to channel substantial resources to FSP fraud prevention and detection efforts.

During fiscal year 1996, we devoted approximately 46 percent of our investigative resources and almost 11 percent of our audit resources to FSP. We completed and issued 691 reports of investigation and 13 audit reports. The results of our work included 766 indictments, 593 convictions, and over \$21 million in fines, restitution, recoveries, and other monetary penalties. Following are some examples of our food stamp audits and investigations.

Issues Affecting Nationwide Implementation of Electronic Benefits Transfer (EBT)

The EBT system is designed to replace food coupons and other Federal benefits with electronic delivery of those benefits. The national strategy includes expanding EBT services to all States by fiscal year 1999. Under agreement with the President's Council on Integrity and Efficiency (PCIE), we were assigned the lead to review EBT systems that deliver State-administered programs. State-administered programs include USDA's FSP and the Special Supplemental Food Program for Women, Infants and Children (WIC), the U.S. Department of Health and Human Service's Aid to Families with Dependent Children (now Temporary Assistance to Needy Families (TANF) under welfare reform), and States' general assistance programs.

Currently, 15 States have operational EBT systems which, in fiscal year 1996, issued about \$1.4 billion in food stamp benefits. Five of the systems operate statewide. An additional 30 States have selected an EBT processor and are currently negotiating contracts. FCS anticipates these systems coming on-line in fiscal years 1997 and 1998. Program spending levels for fiscal year 1996 were about \$22.8 billion for food stamps, \$4 billion for WIC, and \$16.9 billion for TANF.

We are very supportive of EBT and believe it will reduce trafficking by recipients as well as make trafficking by retailers easier to detect and investigate. EBT takes food stamps off the street.

During this past fiscal year, we completed audits of on-line EBT systems delivering food stamp benefits in four States: Maryland, New Jersey, South Carolina, and Texas. We also performed reviews at FCS' headquarters. Security policies and control processes in the four States were adequate to ensure timely and accurate availability of food stamp benefits to recipients and payments to authorized stores. However, we did identify some areas needing improvement, as well as issues that could impact nationwide implementation of EBT. For example:

- Some States proposed expanding their EBT systems into non-EBT States so that recipients visiting or shopping in the non-EBT States would be able to use their EBT cards. Non-EBT retailers could transact sales to out-of-State EBT cardholders independently of FCS' authorization and without an FCS site visit to the store. If implemented, this proposal could diminish FCS' control over a store's eligibility to transact EBT benefits.
- The Security features of EBT cards for operational systems, as well as future EBT systems, may not be adequate. Inexpensive security features, such as fine-line printing and holograms, are not required to be included on the cards al-

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though they would enhance security of the cards and systems greatly. FCS is proposing regulations which include the EBT card security specifications previously mentioned.

- Some inconsistencies in procedures may affect interstate operability of EBT systems. Some States reimburse stores daily for their sales while at least one State waits until the stores request payment. This procedure would potentially allow the processor operating the State's EBT system to hold Government funds indefinitely and would also impact future interstate transactions.
- FCS' regional offices did not fully reconcile EBT processor drawdowns of Federal funds to store transaction data. We found \$37 million in discrepancies, but we did find that the processors requested the proper amount of Federal funds from the U.S. Department of the Treasury.
- Operating controls established by EBT processors identified some concerns: security requirements for processor personnel were not clearly defined, certification standards for third-party processors had not been established, and additional audit requirements for the systems themselves needed to be included in the contracts so that audit opinions rendered on financial statements of agencies being serviced by the EBT processor are not qualified.

We recommended that FCS modify its data base to identify stores eligible to process EBT transactions and that it continue to develop procedures to ensure that out-of-project stores it authorizes to accept EBT transactions are eligible to do so. We also recommended that FCS expedite the issuance of proposed regulations concerning EBT card security specifications and ensure that EBT settlement procedures with stores are consistent.

To strengthen processors' controls, we recommended that FCS direct the States to develop minimum personnel security requirements, develop certification guidelines for third-party processors, and include additional requirements for audits of EBT systems in all contracts. Concerning FCS oversight, we recommended that the national office ensure that complete reconciliations between processor drawdowns and store transactions are performed and that processors maintain accurate EBT retailer data bases. FCS was in general agreement with our findings and recommendations and has initiated corrective actions to address many of these issues.

EBT data has also increased our ability to identify food stamp trafficking. For example:

- Following separate OIG investigations, the owners of two small Baltimore, Maryland, grocery stores pled guilty to trafficking in nearly \$1.5 million worth of food stamps through the EBT system. The owner of one of the stores was sentenced to 1 year in prison while the second owner was sentenced to 2 years in prison and ordered to pay restitution of \$250,000 to USDA. In addition, over \$92,000 from the proceeds of these illegal actions has been seized or forfeited to the Government.

During our investigation, we found that one of the owners thought he had developed a tactic which would allow his illegal trafficking to go unnoticed. Since most trafficking transactions are conducted in even dollar amounts, he had instructed his employees to add \$3 and some change to all trafficking transactions at the store. We found that a total of \$745,623, or 92 percent of all food stamp transactions exceeding \$20 at the store, included this "three dollar and change" multiple during the 18 months the store was open.

These cases are perfect examples of how EBT allows us to use computerized data to conduct sophisticated analyses of store redemptions in order to identify schemes and to prove the amount of fraud against FSP. Prior to EBT, this store owner's scheme may have gone unnoticed since this type of incriminating information was rarely maintained in the store's records.

Other Food Stamp Trafficking

Some other examples of food stamp trafficking we have investigated are:

- The owner of two stores in Columbus, Georgia, pled guilty and was sentenced to 4¼ years in Federal prison and fined \$240,000 for participating in a scheme to illegally traffic and redeem over \$2.1 million in food stamps through the two store accounts. Two accomplices in the scheme cooperated with the Government, entered guilty pleas, were each sentenced to 3 years' probation, and fined a total of \$35,000. The store owner, who was on probation from a populous trafficking conviction and was barred from the program, devised a scheme to continue participating in the program by placing the ownership of the two stores in the names of his accomplices. On numerous occasions during the investigation, the accomplices bought food stamps for cash from undercover agents and operatives.

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- Two separate investigations in Alexandria, Louisiana, resulted in the conviction of eight persons for conspiracy to traffic in approximately \$5.9 million worth of food stamps. All eight were sentenced to 1 to 4 years in prison, fined nearly \$200,000, and ordered to pay restitution of \$6.2 million. To date, assets worth \$383,000 have been seized.
- In Riverside, California, 16 business owners/managers and their associates were arrested and charged with trafficking in food stamps and receiving stolen property. As an example of how food stamps are used as a second currency, food stamps were exchanged for cash, guns, and three vehicles at eight different businesses, only four of which were authorized to accept food stamps. One of the food stamp transactions involved the purchase of a Mercedes Benz automobile from a car dealership. OIG agents worked jointly with California's Office of Alcohol Beverage Control and the Riverside Police Department.

Food Stamp Errors Amount to Over \$2.4 Billion Annually

With escalating caseloads over the past several years, the amount of erroneously issued benefits increased. The combined value of FSP overpayments and underpayments jumped from \$1.1 billion in fiscal year 1989 to about \$2.4 billion in fiscal year 1993. Error rates fell in fiscal year 1994, but the dollar value of combined errors still totaled \$2.3 billion. In fiscal year 1995, FCS developed an error rate reduction plan which called for FCS to help States implement error rate reduction strategies. FCS concluded that some States had not committed enough resources to reduce the error rates. Our review corroborates that more FCS involvement with States is needed since past actions had not led to sustained reduced error rates.

While the error rates fell in fiscal year 1994, we identified several areas that FCS should address. For example:

- Over the last 14 years, States were liable for \$939 million in sanctions but paid only \$6 million because legislation and settlement actions allowed States to eliminate or substantially reduce their liabilities. Therefore, there was little incentive for States to take corrective action.
- States' corrective action plans to reduce errors did not adequately address deficiencies and were not always implemented. Corrective actions did not address deficient staffing levels or backlogs in processing claims.
- Caseworker staffing levels had not kept pace with caseload growth. Workers' caseloads had increased 36 percent over the last 5 years and substantial disparities in workers' caseloads existed between States. Excessive certification periods also had a negative impact on error rates. For example, in West Virginia, about 82 percent of the caseload of 124,050 households had certification periods of 12 or more months. These cases accounted for 85 percent of the State's error rate.
- Caseworkers did not always use the Income Eligibility Verification System (IEVS), and States did not effectively monitor its use. IEVS helps caseworkers to verify the accuracy of reported income and also to identify unreported income. State automated systems did not automatically add Government benefit payment increases, such as Social Security, to households' incomes. Income errors are one of the primary reasons for error rates.

We recommended that FCS pursue penalties against States with histories of high error rates and perform onsite reviews of States' corrective actions. We also recommended FCS evaluate States' caseworkers' staffing levels, review States' use of IEVS, and evaluate the feasibility of automatically recognizing Government program benefit increases in the food stamp case files. FCS agreed with our recommendations or proposed alternative solutions to the deficiencies.

Bank Encoding Procedures Need Monitoring

Approximately \$21 billion annually in food stamps is deposited by 10,000 financial institutions into 37 Federal Reserve Banks. Food stamps must be accompanied by a redemption certificate when deposited into a financial institution. Under agreement with the Federal Reserve Banks, the financial institutions are responsible for verifying that stores have deposited food stamps equal to the amount recorded on the redemption certificate. We evaluated FCS' controls to ensure that store redemption certificates processed by financial institutions were accurately recorded in the agencies tracking system.

Our analysis of data on high-redeemer stores and reviews of food stamp redemption certificates identified five financial institutions with questionable redemptions totaling over \$8.5 million. Redemption certificates had been altered to show that food stamp redemptions were for amounts greater than stores' original deposits. Although we did not find evidence of fraud, we did find that food stamp deposits were not always processed in a manner that provided FCS with accurate redemption in-

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formation which, in turn, severely hindered FCS' ability to properly monitor the food stamp redemption process.

We found that, over a 2-year period, one financial institution had altered at least 625 redemption certificates by changing totals and encoding redemption certificates for more than authorized stores had deposited in food stamps. Because the financial institution lacked internal controls to assure that employees correctly processed food stamps, bank officials revised their operating procedures to include review of food stamp transactions in their internal audits. We also found that the FCS officer-in-charge who had oversight over this bank recognized possible alterations of redemption certificates but did not follow up to determine the underlying problems. DOJ is pursuing civil penalties against this financial institution.

We recommended that FCS (1) issue guidance to all authorized stores on the proper redemption and processing of food stamps and obtain the assistance of all Federal Reserve Banks to do the same for financial institutions, (2) advocate that financial institutions incorporate reviews of food stamp transactions into their internal auditing procedures, and (3) instruct field office personnel on how to properly follow up on indications of irregular activities found during their reviews. FCS officials agreed with our findings and recommendations and are taking corrective actions.

CONSUMER PROTECTION

FOOD SAFETY AND INSPECTION SERVICE (FSIS)

Historically, OIG's highest investigative priority has involved health and safety issues affecting USDA programs. We continue to believe that this should receive our immediate attention whenever serious violations are suspected which may endanger the wholesomeness of America's food chain.

In one such case, the owner of a California poultry ranch, along with his wife and brother, were indicted for violations of the Federal Poultry Products Inspection Act for slaughtering chickens in adulterated conditions without the benefit of inspection and then transporting the adulterated poultry in commerce for human consumption.

During the joint investigation with the State of California's Department of Food and Agriculture, we found that chickens were slaughtered in a filthy facility using equipment that was contaminated by rats, fecal material, decomposing chickens, and the presence of cats and dogs in the immediate slaughter area. The equipment used for slaughter consisted of a plywood table with deep score marks, barrels, and a knife with a rusted blade. The table was adjacent to a row of wire cages which were covered with an accumulation of matted feathers and also contained decomposed chickens which had been present for an extended length of time. The plastic barrels contained feathers and what appeared to be chicken fat or feather oil. No hot water supply was available to allow for cleaning. During the course of the investigation, OIG special agents observed uninspected, adulterated poultry products being entered into commerce in order to be sold to the public for human consumption. This case is currently awaiting trial.

In another case, the owner, the owner's son-in-law who was also the plant manager, and the Federal food inspector assigned to a North Carolina pork processing plant were convicted of offering rotten pork products for sale in commerce. The owner and the plant manager were sentenced to 2½ years and 6 months' imprisonment, respectively, and fined nearly \$10,000. The Federal inspector was sentenced to 2 years in prison and fined \$3,500.

Our investigation disclosed that hogs, which were already dead when they arrived at the plant, were processed and represented as having been inspected and passed under the Federal Meat Inspection Act. Spoiled and rotten meat was either washed in water and bleach or mixed with good product in order to hide its true condition. Our investigation also found that the FSIS meat inspector failed to perform his inspection duties, was involved in disguising the actual condition of the rotten meat, and was involved with other inappropriate activities at the plant.

In an investigation in Pennsylvania, a meat market in Folcroft pled guilty to selling adulterated meat and was sentenced to 1 year of probation and fined \$10,000. Also, the presiding judge prepared a "public notice" stating how the market violated the Federal Meat Inspection Act and sold adulterated meat products, which he ordered to be published three times over a 3-week period in a local newspaper.

During the investigation, which was conducted jointly with FSIS compliance officers, the driver of a rendering truck delivered spoiled meat, bones, grease, and floor sweepings from his truck into the meat market. The spoiled meat was washed, trimmed, ground, mixed with the other waste products, made into ground beef or ground beef patties, and sold to the public. The market purchased the waste products from the truck driver approximately eight times over 7 months.

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During the course of the investigation, the driver encouraged a witness to lie to OIG special agents in order to thwart the investigation.

Eventually, the driver pled guilty to the sale of adulterated meat and conspiracy and following a trial, was convicted of witness tampering. He was sentenced to 1 year and 1 day in prison followed by 2 years' probation and fined \$3,130.

FARM PROGRAMS

FARM SERVICE AGENCY (FSA)

Farm Credit Programs—State Mediation Program Mismanaged

At last year's hearing, I advised the Committee of a concern regarding our authority. I want to update you on this issue at this time. The Texas attorney general instructed Texas Tech University (TTU) officials to deny OIG access to mediation program records, asserting that such records were confidential under Texas law. We have issued Inspector General subpoenas to obtain the records, and litigation in this matter is pending.

We identified a potential conflict of interest for three of the four full-time mediation program employees. A Texas Agricultural Mediation (TAM) official, who in a licensed attorney, had a private law practice specializing in farm matters such as delinquent loans, appeals, bankruptcy, and reorganization. This official confirmed that he sometimes represented USDA borrowers in his law practice. Another employee of TAM was also an attorney with a private law practice. In addition, an employee on the Texas Tech Agricultural Financial Analysis Project had outstanding USDA farmer program loans totaling approximately \$475,000 and had not taken any action in over 10 years to repay or otherwise resolve the delinquency.

To meet the 50-percent matching fund requirement during fiscal year's 1989 through 1993, TTU claimed a portion (usually 25 percent) of the salaries paid to nine university professors and a department chairperson as part of the cost to operate the mediation program. Since these individuals did not work with the mediation program, TTU received excessive grant reimbursements totaling over \$485,000 during this period. TTU also claimed a TAM official as a full-time employee of the mediation program. However, this official routinely taught courses at the university, was allowed 10 to 12 hours per week by TTU for personal business purposes, and routinely served during normal work hours as an active member of various professional organizations. His salary, benefits, and related indirect costs charged to the Federal Government totaled over \$479,000 during fiscal years 1989 through 1995.

TTU mediation program accounting records showed \$347,500 charged to the "Mediation Training" account during fiscal year 1993 through the third quarter of fiscal year 1995; however, we could not identify any formal training provided to TTU or other mediators.

We recommended that the FSA Administrator cancel the certification of the agricultural mediation program administered by TTU and instruct the FSA Texas State Executive Director to implement an alternative mediation program (regulations already provide for such a program) for Texas borrowers. We also recommended that FSA recover the excessive grant funds, clarify the extent and type of mediation training required to meet the mediation program certification requirement, and evaluate the effectiveness of the agricultural loan mediation program by determining whether grant funds are being used effectively. FSA has decided to recertify the TTU mediation program for fiscal year 1997; however, FSA officials stated that the program would not be funded until all issues identified in the audit report are resolved. During our continuing review of the State certified mediation programs, we were denied access to mediation program records for the Michigan, North Dakota, and Minnesota mediation programs. We continue to meet with the FSA Administrator and other Department officials to discuss resolution of these issues.

FSA State Office Officials Improperly Handled Loans and Loan Servicing

We received complaints that high-level Texas FSA officials disregarded regulations and procedures and approved improper loans and loan servicing actions for borrowers who did not meet program requirements. We investigated 2 cases, the FSA National Office reviewed 25 cases, and the Rural Development National Office reviewed 2 cases. We then examined the adequacy of the agency national office reviews.

Our work and the agency reviews confirmed that State office officials violated agency procedures and regulations and approved improper loans and loan servicing actions. Despite the objections of operating personnel, State office management officials approved eight borrower groups for \$2.6 million in unauthorized assistance. Four other cases of State office officials not following regulations were also identified by the national office reviews. However, no action was taken by national office

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officials to follow up or fix responsibility for the improper loans and servicing actions. We were told that the FSA review did not support the allegations.

We disagreed and recommended that the FSA Administrator (1) establish and hold the applicable State officials accountable for not following regulations and procedures in approving loans and providing servicing to individuals who did not meet program requirements, (2) determine whether the responsible national office official properly fixed responsibility and reported State office management's actions that led to the improper loans and servicing, and (3) ensure that future national office reviews address causes and establish responsibility for errors or mismanagement. The FSA Administrator agreed with the recommendations. The primary State officials involved have separated from the agency, and the responsible national office official has been reassigned.

Other Farm Credit Program Activity

A Mississippi cotton farmer was sentenced to 34 months in prison in connection with a fraudulent scheme that relieved him from FSA indebtedness of nearly \$1 million. He was also fined \$10,000 and ordered to pay restitution of \$965,600 to FSA and \$148,000 to a federally insured bank. The farmer filed false petitions in his Chapter 7 bankruptcy, concealing his assets and transfers of real estate and income. The farmer transferred two dwellings to a third person just before filing his bankruptcy petition, with an agreement to regain title to the properties after the bankruptcy discharge, and concealed farm-related income of \$116,000 from the court. The farmer also purchased real estate and automobiles in the name of his wife while under the protection of the bankruptcy court and concealed these purchases from the court.

Farm Program Payments—90-Day Rule

The Food, Agriculture, Conservation, and Trade Act of 1990 provides that, in the absence of misrepresentation on the part of a producer, any determination FSA makes regarding the producer's participation in farm programs shall be final after 90 days, and no action shall be taken to recover overpayments. This 90-day rule applies to erroneous decisions, calculation errors, or overpayments discovered on or after November 28, 1990. The Federal Agriculture Improvement and Reform Act of 1996 continues the 90-day rule, known alternatively as the finality rule.

In an earlier OIG audit, we questioned the need for this rule which allows producers to receive unearned benefits. These kinds of unearned benefits are expected to continue. We determined those cases that are valid under the 90-day rule generally involve only small amounts, where repayment would not place an unreasonable burden on producers. Furthermore, FSA has authority to grant relief to producers if conditions warrant. We recommended that FSA officials seek legislative change to rescind the 90-day rule. Although FSA officials drafted a legislative change, the Department has not formally submitted the change to Congress. The General Accounting Office is currently reviewing this area, and a report is expected soon.

Producers Continue to Circumvent Payment Limitations

The Food, Agriculture, Conservation, and Trade Act of 1990 also continued the \$50,000 limit on 1991 through 1995 deficiency payments and the \$100,000 limit on disaster payments. Our reviews continue to find that producers are using schemes or devices to abuse or circumvent the payment limitation requirements by misrepresenting their farming operations. Some of these situations also impact upon the Federal Crop Insurance Corporation (FCIC) programs which are now administered by the Risk Management Agency (RMA). Following is an example of our reviews.

Large Landlords Used Combination Leases to Circumvent Payment Limits

If large landowners lease their land for a share of the crop, Government payments and benefits up to the limitation are attributed to them for their share of the crop. If they lease their cropland to others for cash, all Government payments and benefits are attributed to the tenants or lessees. However, FSA also authorizes combination cash-share leases where the landlord receives a specified cash minimum together with a share of the crop. FSA determines whether individual combination leases are to be considered a cash or share lease for program payment purposes. Combination leases are considered cash leases, with all program payments going to the tenants if the minimum payment or guaranteed production amount specified in the leases is the normal rental rate for the area. If not, the combination leases are considered share leases.

We reviewed the operations of large landowners in two States to determine whether combination leases were being used to circumvent payment limitation provisions. We found that the combination lease arrangements approved for use by one FSA State office contained provisions establishing lease payments at the greater of

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a cash minimum or a specified share of the total crop revenues or proceeds. The total crop revenues or proceeds included FSA deficiency payments and price support benefits. In effect, some tenants in this State were required by an FSA-approved lease arrangement to pay landlords a share of Government payments and benefits that the tenants received from FSA.

Using these combination leases, two large landlords received over \$1 million in Government benefits indirectly from tenants which they would not otherwise have been eligible to receive because of payment limitation provisions. These arrangements also violated FSA regulations which state that no program payment shall be approved if any lease required by the landlord causes tenants to pay the landlord any Government payment. In contrast, FSA officials in other States under review would not approve combination leases that required tenants to pay any portion of their Government payments to landlords.

We recommended that FSA determine whether the FSA-approved combination leases permitted two landlords in one State to circumvent payment limitation provisions and, if so, to either recover or waive recovery of over \$1 million in payments and benefits provided to tenants which were then given to landlords. We also recommended that FSA officials clarify and consistently apply regulations prohibiting landlords from using combination leases or other agreements requiring tenants to pay them any Government payments or price support benefits earned by the tenants under FSA programs. FSA replied that it will not take action to recover the \$1 million in questioned payments because the producers provided sufficient information for the county committees to make determinations but the county committees read and misinterpreted the leases. However, FSA staff agreed to clarify lease provisions.

Implementation of the Federal Agriculture Improvement and Reform Act of 1996

We evaluated the implementation of the Federal Agriculture Improvement and Reform Act of 1996 (the Act) in order to provide an early warning system of potential control weaknesses as a means to reduce future fraud and waste in the new programs legislated by the Act. We considered the phaseout of acreage reduction programs and the payment of deficiency payments based upon target prices and the establishment of "production flexibility contracts" as the major portion of the Act. Therefore, a mayor focus of our evaluation was on the Agricultural Market Transition Act (AMTA) portion of the Act.

We initiated a three-phase review to assess the implementation of AMTA. This review is a cooperative effort between OIG and FSA and is being conducted concurrently with program implementation. FSA has been receptive to our early involvement and is taking immediate action on review findings when needed.

In the first phase, we focused on producer enrollment and visited 52 county offices in 13 States. Some other examples of concerns we brought to FSA's attention were:

- States were inconsistent in identifying the regions that could be approved to double-crop faults and vegetables. FSA subsequently removed some questionable regions from the list before it was printed in the Federal Register.
- Designated payment shares for landlords and tenant farmers were approved beyond 1996 even though there were no lease agreements between the two parties.
- Farms were approved for payment even though contracts did not show all the necessary signatures.
- Proper powers of attorney were not on file to support signatures on contracts and crop insurance waivers.

We recommended that FSA staff (1) obtain the landlord's concurrence in cases of share leases, (2) obtain proper documentation for contracts, and (3) reconsider the criteria for double-cropping history.

We have since begun the second and third phases of our assessment of AMTA implementation. Phase two will review FSA's controls over the computer software that calculates producer payments. It will verify that payments are properly computed and reconciled to each producer's supporting contract data and that required administrative offsets are made. We will also verify that program benefits are paid to only authorized individuals.

Phase three will assess FSA's controls over AMTA compliance activities. This review will examine internal controls over conversion of contract acreage to non-agricultural use, planting flexibility, protection of contract acreage from weeds and erosion, and producers' reporting of fruit and vegetable acreage.

Further Problems Noted with the Ad Hoc Disaster Assistance Program

In the past, we reported problems with the 1993 Ad Hoc Disaster Assistance Program (DAP). As a result, legislative changes were made and implemented by FSA to improve the program for 1994. These changes included authority to reduce the

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payment rate for crops not planted or harvested. Regulations were also changed to require that producers provide evidence that nonprogram crops, such as fruits and vegetables, were produced on the farm for an identified market. FSA has also implemented better controls over compliance with the \$2 million gross income limitation provisions.

However, we found problems in the 1994 DAP similar to those we reported for the 1993 DAP, although at a lower rate. Ad hoc disaster programs have now been replaced by the noninsured crop assistance program (NAP) with passage of the Crop Insurance Reform Act of 1994, which is effective for 1995 and subsequent years. Since similar procedures exist for the management of NAT as used for DAP, we expect to continue expending substantial resources to evaluate disaster assistance activities.

For the 1994 ad hoc program, we continued to find problems with the reporting of production and farming practices and the establishment of yields and rates. However, the number and monetary value of claims in 1994 have been substantially reduced. FSA paid approximately \$1 billion for crop disaster losses claimed under the 1994 disaster assistance program. We performed 26 audits in 17 States. These 26 audits covered a total of \$13 million in loss claims, and we identified overpayments of \$5.3 million. Approximately \$3 million of the overpayments were caused by administrative error and were forgiven under the 90-day rule. The agency is taking action to collect the other \$2.3 million in overpayments caused by improper reporting by the producers. In these reports, we also questioned about \$2.8 million in 1993, and prior years, disaster assistance payments.

In our investigative activity, two former FSA county officials and 10 other individuals in Kentucky pled guilty to participating in illegal schemes relating to the Feed Grain Program, the Burley Tobacco Program, and the Disaster Program. The parties involved in the fraud formed fictitious program participants, allowed producers to exceed established tobacco quotas, filed false disaster claims, and paid/received kickbacks from other members of the fraud scheme. The fraud in this case caused a loss to the Government of approximately \$850,000.

Six of the 12 defendants received prison sentences ranging from 4 to 57 months, while the others received varying periods of probation and home detention. Additionally, all 12 were ordered to pay a total of more than \$600,000 in restitution and fines. The former FSA County Executive Director, who directed the schemes and received kickbacks, was given the longest sentence, 57 months, and, jointly with another defendant, was ordered to forfeit \$246,000 in assets.

NATURAL RESOURCES AND ENVIRONMENT

FOREST SERVICE (FS)

Preseason Inspections of Airtankers Were Poorly Managed

Airtankers are large multi-engined aircraft that drop fire retardant chemicals to suppress or extinguish wildfires. These aircraft operate through areas of reduced visibility, in close proximity to rugged terrain, and frequently in turbulent air. They are required to meet standards above and beyond those established by the Federal Aviation Administration for basic air worthiness. Preseason inspection by FS inspectors is designed to certify compliance with these additional, more stringent, requirements. Our review showed that the agency was not effectively managing this important program.

Airtankers with Uncorrected Deficiencies Flew Firefighting Missions

FS procedures allowed approval cards to be issued to airtankers even though inspectors had identified serious deficiencies. Airtankers sometimes flew hazardous firefighting missions with broken or malfunctioning equipment. For example, FS inspectors determined that the temperature data amplifier on a C-130A airtanker was inoperative. The temperature data amplifier reports engine temperature to fuel control. Fuel control uses this data to decide to increase or decrease fuel to the engine to keep the temperature constant. The airtanker began flying missions for FS and continued to do so for almost 2 months before replacing the defective equipment.

Investigations of Fatal Aircrashes Were Conducted by the Same Inspector Who Approved the Airtankers and Pilots for Duty

We found that the same inspector who had initially signed the preseason inspection report was assigned as part of the team to investigate the causes and circumstances surrounding two different fatal airtanker crashes. In one instance, the FS employee signed the preseason inspection report showing approval contingent on the correction of several deficiencies. There was no documentation that the defi-

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ciencies were corrected before the aircraft began fighting fires. The airtanker crashed into the Lolo National Forest, killing both the captain and the copilot.

In the subsequent FS investigation, the employee who initially approved both pilot and aircraft was assigned responsibility for "aircraft and pilot approval records." The report concluded that "Both piloted were qualified and approved" and "The aircraft was airworthy at time of takeoff on mishap flight."

Officials Did Not Properly Assess Risks

We also found that FS officials did not comply with risk management guidance set forth in the agency's Aviation Safety Plan. We observed that important decisions were made without all the facts or the concurrence of management. As a result, FS has not ensured appropriate maintenance for ex-military airtankers previously transferred to contractors. In addition, FS did not follow up or perform risk analysis to determine the impact of information reported by the National Transportation Safety Board (NTSB) concerning the cause of a fatal FS airtanker accident. According to the NTSB Brief of Accident, the most probable cause of the accident was deemed to be fuel leakage due to O-ring failure. Upon receiving the NTSB conclusions, the Aviation Safety Manager determined that no action was needed and simply filed the report away. When we became aware of this potentially dangerous situation, we recommended that FS inspectors immediately check O-rings on similar airtankers to ensure that the same problems would not cause another fatality.

We recommended that FS officials immediately implement the necessary measures to obtain compliance with the management controls already contained in their own policies and procedures.

We also recommended that FS officials exert some type of meaningful supervision to ensure appropriate assessment of risk prior to any future transfer of ex-military aircraft to airtanker contractors. Prudent risk management dictates that FS safety officials consider all information available to include obtaining and reviewing all NTSB reports of aviation incidents involving FS-owned or contract aircraft to identify potential safety concerns.

FS management concluded that our recommendations would help strengthen the preseason airtanker inspections and more effectively link management's involvement with aviation and safety specialists in identifying and assessing risks. In December 1996, FS submitted a plan to address our recommendations. Once the specific actions outlined in this plan are in place and operating, we believe that the preseason inspection program and overall air safety program will be more effective.

Cooperative Forestry—Grant Funds Advanced in Lump Sum Cost the Government \$11 Million

The America the Beautiful Act of 1990 authorized FS to give the National Tree Trust Foundation (NTTF) a \$19.8 million grant to promote the planting and care of trees. FS advanced the entire amount to the foundation in one lump sum even though Federal regulations required that the funds be advanced only as needed. This decision to advance all funds at once cost the Government over \$7.8 million in interest on funds the Treasury borrowed through the end of October 1995. In addition, the Treasury paid \$3.2 million in interest to NTTF because the foundation had invested a major portion of the grant funds it received (i.e., \$19.8 million) in U.S. Government securities. Ironically, a provision in the laws that created the grant allows the foundation to keep the interest it received from Government investments and another \$1 million in interest the foundation earned from other investments.

The purpose of the grant was to enable the foundation to make further grants to local organizations to plant and care for trees. However, during the 5 years the foundation has been operating, it has made only \$792,000 in grants. Not only did the foundation not grant the \$19.8 million, but the small grants it did make were less than one-fifth of the \$4.2 million interest it acquired as a result of its investments of Government funds. The grant required the foundation to match Federal funds with donations from the private sector. We found that only two corporations have contributed to the foundation in the amount of approximately \$400,000.

Since the original grant period was due to expire in September 1996, we recommended that FS request NTTF return unspent grant funds to the Treasury. We based this recommendation on the fact that FS would no longer have oversight over the grant funds and would have no assurance that the funds would be spent as intended by Congress. FS responded that it would request that, instead of the funds being returned, an agreement extending FS' oversight of the grant be negotiated with NTTF. This agreement was signed by NTTF and FS in October 1996 and continues FS oversight over the grant for an additional 5 years.

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NATURAL RESOURCES CONSERVATION SERVICE (NRCS)

Inappropriate Cooperative Agreement

Based on a Congressional request, we evaluated the legality and propriety of a cooperative agreement between NRCS and the Minority Enterprise Financial Acquisition Corporation (MEFAC). The stated purpose of the cooperative agreement was the establishment of economic development to assist rural communities on business and economic issues. We found that NRCS officials used Rural Development funding provided by the Rural Business Service (RBS) to enter into an inappropriate cooperative agreement with MEFAC. The RBS agency official took direct personal action to facilitate the award of the \$250,000 agreement and subsequent payments totaling \$150,000. The funds were channeled through the NRCS Alabama State office and ultimately used, in part, to benefit pastors and active lay persons of specific religious denominations.

As one example of the type of control procedures that were bypassed, the RBS agency official personally signed forms SF 270, Request for Reimbursement, in lieu of requiring signatures from MEFAC officials. This practice was unusual, as the certification was designed to be signed by an official of the entity receiving the payments.

MEFAC drew down and spent \$150,000 of the \$250,000 cooperative agreement and did not conduct any of the regional workshops required by the statement of work or maintain accounting records showing the disposition of the funds expended. The scattered records, which were provided in response to our request, confirmed material noncompliance with regulations for the use of cooperative agreement funds, to include excessive spending and unallowable costs. As a result, neither the Government nor the rural communities received value for the \$150,000 in Federal funds expended.

We recommended terminating the cooperative agreement and recovering the funds expended. NRCS and RBS agreed with our findings and recommendations and planned corrective action to include cancellation of the cooperative agreement and efforts to collect the expended funds.

INSURANCE

RISK MANAGEMENT AGENCY (RMA)

Audit Verifies Allegations of Crop Insurance Abuse

During the spring of 1996, the Coastal Bend area in south Texas experienced a severe drought that impacted the three primary crops in the area: corn, cotton, and grain sorghum. FCIC had established the same final planting date (April 195) and late planting period (April 16 to May 10) for these three crops. We received complaints that insurance agents were using a loophole in the standard crop insurance policy to give insureds in this area an unfair advantage. According to the allegations, double and even triple indemnities were paid to producers who planted two or three different crops sequentially on the same acreage before the May 10 deadline. The normal practice was to replant the original crop if it did not make an adequate stand.

We determined that producers were able to increase their indemnity payments by (1) not replanting the original crop, (2) planting grain sorghum or corn after cotton failed to mature in soil treated with a yellow herbicide (e.g., Treflan), and (3) lose adjusters making questionable assessments of seed viability. Rather than producers replanting the original crop when it failed, reinsurance companies had the acreage appraised and released for further use. Therefore, depending on the dates the acreage was released, it was possible to have as many as three different crops fail on the same acreage during the same crop year.

We questioned whether it was the intent of the crop insurance laws to allow multiple indemnity payments in this situation. Also, some insureds were planting grain sorghum or corn in fields where they had applied Treflan within 12 to 18 months, contrary to the manufacturer's recommendation. Some of these insureds were attempting to plant a second crop on acreage applied with Treflan by planting deep enough to avoid the chemical's effects. In addition, some loss adjusters were determining potential crop productions of zero, based on seed appearance and condition. This appraisal method has not been approved by RMA and, according to Extension Service representatives, may not accurately determine viability.

Based on the initial results of the joint review, RMA issued guidance to reinsurance companies. FCIC plans to review all the insurance claims filed in the area for evidence of abuse, and OIG will monitor this review.

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CONSUMER PROTECTION

ANIMAL AND PLANT HEALTH INSPECTION SERVICE (APHIS)

USDA-Licensed Individuals Keep Exotic Pets That Could Endanger the Public

Under the Animal Welfare Act of 1966, APHIS is responsible for regulating the use of warm-blooded animals in research, exhibition, and commerce in order to ensure their humane treatment. APHIS issues class "C" licenses to individuals, carnivals, zoos, circuses, and education exhibitors who wish to display animals to the public. We reviewed APHIS' policies and procedures related to the licensing of animal exhibitors, particularly those applying to exhibit dangerous or exotic animals such as lions or tigers. Our review focused on licensees with 10 or fewer animals because of the greater likelihood they may not be true exhibitors and may not be properly qualified to safely handle dangerous animals.

Although APHIS' exhibitor licensees were intended solely for those wishing to exhibit animals to the public, we found that the broad wording of APHIS' regulations has allowed a wide variety of individuals to obtain licenses. Sixty-four percent of the licensees we visited did not exhibit their animals but instead maintained them as personal pets. These individuals had obtained exhibitor licenses to circumvent State and local laws intended to protect the public by restricting ownership of such animals.

Many of the animals, such as lions, bears, and wolves, kept by these individuals are considered dangerous and were often kept in urban or other populated areas. However, APHIS issued licenses without requiring the owners to provide any evidence that the owners had the knowledge, experience, or qualifications to safely handle such animals. APHIS' preclicensing inspections are geared solely to determining if the owners' facilities are sufficient to house the animals present at the time of inspection; however, once licensed, an individual may acquire any additional number or type of animals without APHIS' approval. In some instances, we found large and dangerous animals that were housed in enclosures inadequate to contain them. In one such case, a licensee's pet tiger had to be shot to prevent it from escaping into the surrounding neighborhood.

We recommended that APHIS amend its regulations to (1) restrict the definition of an "exhibitor" to exclude pet owners, (2) require that applicants meet standards of knowledge and experience before being licensed to exhibit, and (3) limit the ability of licensees to obtain additional large or dangerous animals without APHIS approval. We also recommended that APHIS deny licenses for possession of exotic animals which would violate State or local laws and explore the possibility of entering into cooperative agreements with selected States to more efficiently carry out its inspection and enforcement activities. APHIS officials agreed with our findings and recommendations.

RURAL DEVELOPMENT

RURAL HOUSING SERVICE (RHS)

Rural Housing Program

In an investigative case in Tennessee, a woman was convicted of making false statements and false claims to RHS concerning her income, assets, and permanent place of residence in order to receive rental assistance in Florida while she was actually a resident of Tennessee. The defendant certified in RHS documents that she had no assets and income apart from Social Security when, in fact, she lived with her spouse on a Tennessee cattle farm they owned. The couple's house was valued at \$225,000, and they had income which at times exceeded \$100,000 annually. Government witnesses testified that the defendant referred to her Florida rural rental apartments as her "Florida Condos." The defendant sometimes stopped by the apartments in her \$47,000 34-foot motor home en route to Disney World. She was sentenced to 1 year in prison and ordered to pay restitution of \$22,674.

Rural Rental Housing (RRH) Program

Many of our audits of the RRH Program are performed in response to agency requests. Others are self-initiated and address problems not previously identified. Federal regulations allow borrowers to use independent management companies to manage their properties or to form management companies (identity-of-interest companies) to manage their own and/or other RRH projects. These types of relationships must be disclosed to RHS.

A joint audit-investigation of a management agent disclosed he removed \$700,000 from the accounts of eight RRH projects and used the funds for his personal benefit. The management agent (1) falsified confirmations of balances in the projects' bank

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accounts to cover up a diversion of \$514,000; (2) deposited U.S. Government rental assistance checks payable to RRH projects into bank accounts controlled by him to divert \$45,000 from the projects; (3) transferred \$98,000 from RRH accounts to a bank account controlled by him and designated for payment of project expenses but used the funds for nonproject purposes; (4) deposited checks payable to RRH bank accounts totaling \$13,000 into bank accounts controlled by him; and (5) withdrew \$98,000 from RRH project reserve accounts without RHS authorization. The management agent pled guilty to diverting funds of over \$700,000 to his own use or benefit.

We reviewed another RRH borrower, also acting as management agent of four projects, who had diverted over \$2.4 million for his own use or benefit. The audit disclosed that (1) \$938,000 was spent for nonproject purposes; (2) \$536,000 in excess reserve funds was withdrawn without RHS authorization; (3) \$488,000 in management fees was expended in excess of amounts authorized by RHS; (4) \$248,000 for returns on investments was withdrawn in excess of amounts authorized by RHS; (5) \$147,000 in accrued interest owed by the borrower to the projects was removed from project books; and (6) improper withdrawals from tenant security deposit accounts totaling \$19,200 were made.

RURAL UTILITIES SERVICE (RUS)

Water and Waste Loans

Private lenders were not being given the opportunity to review applications to determine their interest in financing the projects. Applicants must be unable to obtain commercial credit in order to be eligible for assistance, but RUS does not require borrowers to contact investment lenders as a potential source of financing and document such contacts in writing. Our review of the approval process for water and waste disposal loans disclosed that RUS was competing with private credit sources. Based on our review, we statistically projected that RUS funded 813 water and waste loans, totaling approximately \$832.7 million, which commercial lenders may have financed if given the opportunity.

RUS does not require former borrowers to pursue additional financing from the lenders who had purchased their prior loans under the Discount Purchase Program (DPP). We also statistically projected that 132 loans, totaling over \$184.7 million, may have been financed by the lenders who purchased previous loans under DPP. We are working with the agency to establish a policy to require future applicants to submit a proposal from at least one investment lender capable of financing water and waste loans and to require that State office and/or district office staff discuss investment lenders nationwide with future applicants.

MARKET DEVELOPMENT

FOREIGN AGRICULTURAL SERVICE (FAS)

During the past year, an OIG investigation resulted in the largest monetary settlement for a fraud in the history of USDA, when a prominent international grain company and one of its foreign affiliates reached a global settlement with DOJ and USDA. The grain company paid \$25 million to the U.S. Government in settlement of all civil claims, and its affiliate paid a \$10 million fine after pleading guilty to a criminal charge of conspiracy. In addition, three associated entities agreed to permanent debarment from participation in all Federal programs.

These actions culminated a series of high profile investigations conducted by OIG since 1989 into fraudulent activities related to the export of agricultural commodities to Iraq under USDA's Export Credit Guarantee Programs, beginning with our involvement in the investigation of the Government-owned Italian Banca Nazionale del Lavoro.

After 6 years of intense investigation, our efforts have lead to monetary results relating to USDA programs totaling some \$50 million in fines and restitution, hundreds of millions of dollars in cost savings, and the debarment of seven parties from participation in USDA and other governmentwide programs.

As a result of another OIG investigation, a North Carolina vegetable oil supply company's vice president, plant manager, and a former USDA grain inspector were convicted of conspiring to defraud the Commodity Credit Corporation (CCC) of \$2 million by underfilling contracts to deliver vegetable oil to CCC. CCC purchased the packaged oil from the supplier for export and free distribution to developing countries under Public Law 480, Title II, Food for Peace Program.

Some of the illegal proceeds were used by the vice president to pay kickbacks to the plant manager and the USDA inspector, as well as to fund the construction of a baseball field, which bears his name, at a local college. Sentencing and forfeiture

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action are pending. Assets worth an estimated \$6 million were seized from the vice president including two homes, an ocean-front condominium, manufacturing equipment, and over \$400,000 in cash. The case was worked jointly with the U.S. Agency for International Development's OIG, the Federal Bureau of Investigation (FBI), and the Internal Revenue Service (IRS).

Another OIG investigation led to a guilty plea by a Florida dairy exporter for making false statements to FAS after he received over \$1 million in subsidies under the Dairy Export Incentive Program (DEIP). The payments were made in 1994 to subsidize shipments of dry milk to the United Arab Emirates (UAE). However, the shipments were diverted in Singapore and shipped to the Philippines instead. Shipments of milk to the Philippines were not eligible for subsidy payments under DEIP. To conceal the fact the milk was shipped to an ineligible country, the exporter formed a fictitious company with an UAE address and created false bills of lading and arrival notices which were then submitted to FAS in order to receive his subsidy payments.

Following his guilty plea, the exporter was sentenced to serve 6 months in prison, with another 6 months of home detention, and was ordered to pay more than \$1 million in restitution.

Food Aid Assistance to the Russian Federation

The Freedom Support Act of 1992 allowed the United States to contribute food and technical assistance to the former States of the Soviet Union. We audited one nonprofit organization which received \$19.6 million of commodities donated by CCC to carry out humanitarian and development programs in Russia.

We found the organization could not account for \$600,000 of the commodities and misappropriated commodities valued at \$1.5 million. Also, FAS needed to determine the proper disposition of \$3.6 million of funds generated by the sale of the donated commodities.

FAS has agreed to recover the value of the misappropriated and unaccounted for commodities and to determine the disposition of the \$3.6 million of sale proceeds.

MANAGEMENT AND CONTROL OF ENVIRONMENTAL HAZARDS

USDA Facilities Are Not in Compliance with Environmental Laws and Safety Standards

Executive Order 12088 requires Federal agencies to ensure that facilities under their stewardship comply with Federal, State, and local guidelines for the control and abatement of environmental pollution. Executive Order 12196 directs the heads of agencies to establish and implement standards and program elements for the protection of employee safety and health. The agencies of USDA are responsible for the environmental and safety compliance of owned and leased facilities that include over 191 million acres of land and more than 21,000 buildings that house its operations. From its inception in fiscal year 1988 through fiscal year 1996, the Hazardous Waste Program has obligated more than \$130 million to bring USDA facilities into compliance with State, local, and Federal environmental standards.

This past year we reported on FS' efforts to identify, assess, and clean up environmental hazards from active and abandoned mines. Our work found that an extensive remedial effort had barely started. We estimated that site cleanups and the correction of environmental hazards and mining deficiencies would require the input of high-cost technology for many years to come. Our audit disclosed that, as of August 1995, there were 2,500 mining sites producing pollution that would need \$2.1 billion for cleanup while still another \$2.3 billion might be needed to keep other sites from becoming future pollution problems. FS now recognizes this long-term liability and has begun to develop a cleanup plan. It has also undertaken measures to reduce further pollution and to recover from commercial users the costs of both monitoring and cleaning up their mining sites.

We have recently reported our review of the Department's management of hazardous biological materials—the pathological, biomedical, biohazardous, toxic, infectious, or medically hazardous agents that pose harm to humans if improperly handled or stored. We found that risks to employee and public health were increased because agencies did not have adequate control over biological agents and waste at USDA facilities and that some facilities were susceptible to illicit access that could threaten national security. As a result of our disclosure, the Department is now in the process of developing an interagency coordinated biohazards policy and standards committee, individual agency biosafety programs, and improved inspection procedures.

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ACCOUNTING, FINANCIAL, AND INFORMATION RESOURCES MANAGEMENT

Financial Statement Audits

In accordance with the Chief Financial Officers Act of 1990 and the Government Management Reform Act, we completed seven fiscal year 1995 financial statement audits. We issued unqualified (clean) opinions on the financial statements of FCS, CCC, the Federal Crop Insurance Corporation, and the Rural Telephone Bank. Audits of Rural Development and FS received a qualified opinion and adverse opinion, respectively. And, we issued a disclaimer on the USDA consolidated statement. Rural Development received a qualified opinion because sufficient documentation was not available to assess the reasonableness of credit program receivables and the estimated losses on loan guarantees. FS received an adverse opinion due to pervasive errors, material misstatements, and departures from applicable accounting principles which affected various financial statement accounts such as property, plant, and equipment. Material weaknesses existed in FS controls over compilation of its financial statements, integration of accounting system data into the general ledger accounts, and data entry at the field level.

We made a substantial commitment in fiscal year 1995 to help FCS overcome its systemic weaknesses by providing management advisory services to the agency. We assigned a senior auditor to work closely with FCS to rectify longstanding encumbrances to accurate reporting.

This joint OIG/FCS effort played a major role in the improvement in the agency's financial statements, as evidenced by an unqualified opinion in fiscal year 1995 from a disclaimer in fiscal year 1994. In fiscal year 1997, we are focusing on assisting FS in its efforts to improve its financial condition. OIG is working in tandem with the Office of the Chief Financial Officer and FS to identify and isolate the most significant financial and accounting weaknesses and to develop an action-oriented plan to yield prompt resolution. Many of the problems confronting the task force are systemic in nature and/or exacerbated by a lack of documentation and, thus, will not be rectified overnight. However, our commitment to this project reflects our determination that this is the best and fastest way for FS, and ultimately the Department, to generate usable financial statements.

NFC Needs to Continue Improvement of Management Controls

Our audit of management controls at the National Finance Center (NFC) disclosed that improvements are needed to provide additional assurance that the integrity of the accounting data was adequate. We found that reconciliations were not performed or resultant variances were not fully resolved to ensure that, for example, feeder systems were properly summarized to major application systems. In addition, the process governing accounting adjustments was not sufficiently controlled to preclude unsupported entries. In response to our recommendations, NFC has developed a corrective action plan to rectify the conditions reported.

NFC and Working Capital Fund Need to Improve Their Accounting and Rate-Setting Practices

Our audit of the working capital fund at NFC disclosed that improvements were needed to ensure that profits were accurately accounted for and users were equitably billed. We recommended that NFC strengthen the coordination between its rate-setting, budgeting, and accounting processes; improve its billing; and document its rate-setting and allocation decisions.

EMPLOYEE INTEGRITY

Investigation of serious misconduct by USDA employees remains a high priority for OIG. During fiscal year 1996, OIG issued 59 reports of investigation concerning serious breaches of employee integrity by USDA employees. Our investigations resulted in 17 convictions of current and former USDA employees, and 61 personnel actions, including reprimands, suspensions, removals, resignations, and alternative discipline. For example:

—A soil conservation technician in Nevada is awaiting sentencing after he was convicted of making false statements to conceal the theft of over \$500,000 worth of excess property from several U.S. Army depots. All of the equipment, which he claimed to be for the use of NRCS, was diverted to the South Fork Indian Reservation, where the employee was a tribal member. Although the employee maintained that the equipment, including a bulldozer, road grader, and boat, was to be used for firefighting purposes, we found it in private use, scattered across the reservation. While the employee traveled throughout the Western United States acquiring the property, he falsified his travel and attendance records to make it appear that he was on official business. This investigation

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was conducted jointly with the General Services Administration's OIG, the FBI, the Defense Criminal Investigative Service, and the Defense Logistics Agency.

CONCLUSION

This concludes my statement, Mr. Chairman. As you can see, the work of OIG is far-reaching and expansive. I appreciate the opportunity to appear today and present this information, and I hope that my comments have been helpful to you and the Committee. I will be pleased to respond to any questions you may have at this time.

OFFICE OF THE SECRETARY AND DEPARTMENTAL ADMINISTRATION

PREPARED STATEMENT OF PEARLIE S. REED, ACTING ASSISTANT SECRETARY FOR ADMINISTRATION

Mr. Chairman and Members of the Subcommittee my presentation will discuss the 1998 budget requests for Departmental Administration; Agriculture Buildings and Facilities and Rental Payments, including the Department's Strategic Space Plan; Hazardous Waste Management and the Office of the Secretary.

Testifying with me today to ensure thorough and complete answers to your inquiries are key members of the Department's financial management leadership: Ted David, Acting Chief Financial Officer, and Anne T. Reed, Acting Chief Information Officer. Also with us are Steve Dewhurst, the Department's Budget Officer, and Connie Gillam, the Budget Officer for Departmental Administration.

USDA STREAMLINING

Over the last few years we have achieved significant reductions in our staff years and costs. By the end of 1996, our streamlining effort was ahead of schedule and USDA had eliminated 13,500 staff years with only minimal use of Reductions-In-Force, RIF's. These reductions have been accomplished largely by offering buy-outs and early-outs to employees, and through prudent management of vacancies. Also, the Department requested and received from Congress additional buy-out authority running from fiscal year 1997 through 1999. Most employees who accepted the fiscal year 1997 buy-outs were required to be off their agencies' rolls by October 31, 1996.

CAREER MANAGEMENT RESOURCE CENTERS

Our collocated Career Management Resource Centers in Washington, D.C. and Kansas City provide a wide variety of career transition services to assist the USDA work force in making informed decisions about career transitions, such as exploring job opportunities within and outside of Government, retirement, self-employment, and other options. This activity is fully supported by the Department and mission areas to ensure that the work force has the necessary tools to manage their careers in this time of downsizing, streamlining, reorganization, and budget constraints. In addition, these Centers support the September 12, 1995, Presidential Memorandum on Career Transition Assistance for Federal Employees.

CIVIL RIGHTS

Departmental Administration—DA—fully supports Secretary Glickman's civil rights initiative of creating an environment in which every customer who comes to a USDA office is treated fairly, effectively, and efficiently, and a workplace in which all of our employees are treated with dignity and respect. As you may know, I headed the Civil Rights Action Team, created by the Secretary, to do a thorough audit of USDA civil rights issues and provide him with recommendations for improvement. The Team issued its report of recommendations on February 28, 1997.

In order to assist us in our investigation, 12 civil rights listening sessions were held in various sites around the country to hear from our customers and employees on civil rights issues in both program delivery and employment. These listening sessions provided an opportunity for minority and socially disadvantaged farmers to discuss their concerns about USDA program delivery, assisted USDA in identifying new ways to build partnerships and improve the Department's outreach and service, and provided an opportunity for USDA employees to discuss their work environment concerns. With one exception, each listening session included a panel consisting of either Secretary Glickman or Deputy Secretary Rominger and other Team members. The Team discussed and evaluated the sessions, and presented recommendations to Secretary Glickman.

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As an extension of the listening sessions, USDA established a toll-free telephone number to facilitate responsiveness. This toll-free number is staffed to provide information on the status of current allegations of discrimination, both in the area of employment and program delivery, as well as to take comments and respond to questions from the public. USDA employees and other interested persons are able to access the newly created Internet Web site on the USDA Home page for information, or contact the Team by facsimile, written correspondence or electronically.

EQUAL EMPLOYMENT OPPORTUNITY/PROGRAM DELIVERY COMPLAINTS

One of the major civil rights problems identified within USDA was that complaints were not processed in a timely manner. As a result, there was a backlog of complaints that increased each year. To begin addressing this problem, some funds were redirected to the civil rights area during fiscal year 1996. With these funds we have increased our civil rights staff by 20; increased contracts with private firms to investigate complaints, provide additional counseling services, and draft final agency decisions; assigned 28 temporary detailees from the various mission areas to clear up the complaints backlog; established internships for Howard University law students to adjudicate cases; and installed new EEO case-tracking software.

These efforts achieved dramatic results. USDA closed 604 formal employee complaints in fiscal year 1996, an increase from 285 in fiscal year 1995. Also, we reduced the time to close an employee complaint case from 1,003 days in fiscal year 1995 to 491 days in fiscal year 1996. Last year we received 212 program complaints of which 118 cases were resolved. The average processing time for program discrimination complaints in fiscal year 1996 was 415 days. Despite this significant reduction in case processing time, the complaint backlog remained at an unacceptable level.

To overcome the complaint backlog problem, the Congress appropriated an additional \$1.5 million in fiscal year 1997. This funding level is maintained in the 1998 budget request to continue these activities and ensure that the past backlog will not occur in the future. As more staff are hired and trained, we expect further reductions in the case backlog and in case processing time. We are making substantial progress and will continue to work to improve program delivery. In order to improve program delivery we are working on ways to prevent and resolve complaints and ensure in discrimination cases that responsible person is held accountable.

COMPLAINT PREVENTION AND RESOLUTION

Complaint prevention and resolution are goals we are accomplishing by educating and training our managers and supervisors. Each senior executive is required now to develop individual benchmarks for performance on civil rights and equal employment opportunity. These benchmarks are intended to establish expectations for performance and provide objective bases for measuring performance in these very important areas. We are also providing a diversity training course for the entire Sub-Cabinet, agency heads, and senior staff. Also, we developed a Conflict Resolution Program designed to help resolve conflicts in a non-adversarial way between managers and employees. So far, we have tested the process on four cases and all were successfully resolved.

MANAGEMENT ACCOUNTABILITY FOR EMPLOYMENT PRACTICES

Management accountability is the very cornerstone of the equal employment opportunity agenda. This issue has been attacked on three fronts. First, we recently established a special compliance unit to follow-up and determine that settlement agreements, or proposed disciplinary actions against discriminating officials, are being carried out by the agency. Second, we ensured that supervisors found guilty of discrimination are accountable for their actions by holding their Sub-Cabinet official responsible for corrective action. Third, we established an ambitious schedule of EEO compliance reviews to look at systemic problems and make recommendations to improve our performance in following Equal Employment Opportunity and Civil Rights laws, Executive Orders, and regulations.

As Secretary Glickman stated, "We have a real opportunity to make positive change in the area of civil rights enforcement—to ensure that USDA is a diverse, civil Department to both its employees and its customers." Departmental Administration fully supports the Secretary to bring about this change.

REENGINEERING PROCESSES

We are continuing our effort to reengineer USDA's administrative processes through the Modernization of Administrative Processes—MAP—program in USDA.

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This program develops administrative processes and systems which lead to better customer service and more efficient business practices in the functional areas of Procurement, Property Management, Human Resources Management, Information Resources Management, and Civil Rights. Great attention has been focused by the Congress and this Administration on streamlined administrative management within the Federal government, especially on ways to decrease administrative costs. Prime examples of MAP's reengineering efforts include the Purchase Card and the Third-Party Draft Processes. In February 1997, USDA began implementing a Departmentwide purchase card program. These are generally purchases by non-procurement personnel of less than \$2,500, or purchases by USDA procurement officials of less than \$100,000. The purchase card program is eliminating the need for paperwork, signed authorizations and delays for office-oriented acquisition. An authorized employee with a purchase card can purchase a wide range of business-related goods and services other than travel. By the end of fiscal year 1997, about 9,000 employees will be issued the USDA purchase cards. We expect that our reengineered purchase card program, once fully implemented, will result in reducing the current \$32 administrative cost for processing a transaction to \$17 per transaction.

The USDA purchase card program also is designed to shorten the time needed to make purchases and improve the quality of management information needed to monitor those purchases. Because of automation, the account reconciliation process will be less time-consuming and will contain fewer errors.

MAP team participants worked with the National Finance Center to develop new computer software that allows purchasers to eliminate several steps in the current purchase process, as well as a number of forms. In fact, this is an automated process where billing, account reconciliation, and subsequent payments are all done electronically. This system will eliminate redundant levels of review which will result in cost avoidances.

Besides the advantages of the purchase card program, the new software includes the use of "convenience checks" issued to authorized employees with individual names printed on each check. Employees can write checks drawing against their purchase card accounts. This new system will also benefit small and minority owned businesses because payments for goods and services received will be accelerated.

These are just a few areas—we are aggressively looking at more. In conjunction with the USDA agencies, MAP has initiated business modernization initiatives in Procurement, Property Management, Information Resources Management, and Civil Rights. When MAP's work is done, its legacy will be a more efficient and cost-effective USDA. The MAP Office will sunset in 1999, and I can assure you that once its mission is completed, MAP will leave behind a better USDA. Other modernization efforts are taking place in USDA within the functional offices themselves. For instance, within Human Resources Management there is a modernization effort to develop a customer-oriented and streamlined human resource management system for the Department.

USDA HUMAN RESOURCES MODERNIZATION

Departmental Administration, with assistance from the Office of the Chief Financial Officer, is leading USDA Human Resources Offices and cross-serviced agency stakeholders in an extensive Human Resources Modernization effort to develop a customer-oriented and streamlined human resource management system. The paper copy USDA recruitment bulletins have been replaced by electronic media formats. USDA vacancy announcements are now available to customers on the Internet and the Office of Personnel Management touch-tone telephone hotline. Through our efforts with the National Finance Center and the Forest Service to streamline and automate cumbersome personnel processes, we are able to avoid printing and mailing costs.

Another example of our ongoing efforts is the Employee Express pilot project which now allows 10,000 USDA employees to use a touch-tone telephone or touch-screen computer to make changes to their personnel records such as address changes, federal and state tax withholding, financial allotments, and health benefits. Approximately 30 percent of all changes to personnel actions are employee-generated. In November 1996, Employee Express allowed employees to make changes on-line to their Thrift Savings Plan and Health Benefits during Open Season. Additionally, DA streamlined the Departmental Personnel Manual, reducing two bookshelves of issuances to one three-inch binder and placing it on the DA Home Page on the Internet. Annual printing and mailing costs will be avoided by this change.

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USDA SMOKING POLICY

USDA's new smoking policy, which became effective on January 16, 1997, prohibits smoking inside all USDA facilities and motor vehicles. The Department is focusing on providing a healthy, comfortable work environment for all employees, contractors, and visitors, and requires that everyone share in the responsibility to achieve this effort. This policy applies to all buildings and facilities—both at headquarters and USDA field locations, as well as USDA offices overseas—that are owned, leased or otherwise occupied by USDA. It covers all interior parts of the building, including corridors, restrooms, cafeterias, stairways, and enclosed offices occupied by only one employee.

However, the Department remains sensitive to its employees who choose to use tobacco products and has designated “outside smoking area” sites. These sites are at least 15 feet away from common entrance and exit points to a facility and offer a measure of protection from the weather elements. For instance, in the Washington, D.C. Headquarters Complex, outside locations have been identified at entrances with canopies to provide employees protection from the weather. In USDA field office locations, Agency Heads have been delegated the responsibility for establishing outside smoking areas.

USDA agencies are also responsive to their employees and can authorize the use of available funds for training, education, and counseling for smoking cessation programs for its employees—but not for items considered personal medical expenses for treatment and rehabilitation, such as nicotine gum or patches. We are hopeful that both smokers and non-smokers in USDA facilities and motor vehicles will be thoughtful, considerate, and cooperative to ensure the success of this policy.

DEPARTMENTAL ADMINISTRATION BUDGET REQUEST

This budget was developed under some very tight funding constraints—we are absorbing half of the pay cost increases and all of the inflation costs in our fiscal year 1998 Budget Request. The Budget Request total is \$25,258,000, a net increase of \$110,000 over the adjusted fiscal year 1997 level of \$25,148,000. Of this net increase, \$310,000 is for pay cost increases. A decrease of \$200,000 is offset by an equivalent increase in the request for the Office of the General Counsel to provide legal services required to adjudicate civil rights complaints within the Department.

OFFICE OF THE SECRETARY

I now turn to the individual budget requests for the other appropriations, starting with the Office of the Secretary—OSEC. The OSEC provides policy oversight and guidance for the Department and maintains relationships with agricultural organizations and others in the development of USDA programs. OSEC also oversees special projects that are conducted at the behest of the Congress. These projects include short-term studies, investigations, and research on matters affecting the Department or its constituents.

The 1998 Budget Request for the Office of the Secretary is \$11,400,000, an increase of \$372,000 over the 1997 level. This increase consists of \$142,000 for pay cost increases, and \$230,000 to provide additional funding for the Office of the Under Secretary for Food Safety and the Office of the Under Secretary for Food, Nutrition and Consumer Services.

AGRICULTURE BUILDINGS AND FACILITIES AND RENTAL PAYMENTS

The 1998 budget request of \$131,085,000 is a net decrease of \$12,913,000 below the adjusted 1997 level. This decrease consists of an \$18,505,000 reduction in the Strategic Space Plan, a reduction of \$1,599,000 for the rental payments to the General Service Administration, an increase of \$4,491,000 to secure and maintain the Headquarters Complex and the Beltsville Office Facilities, and an increase of \$2,700,000 to cover a necessary one-time relocation expense due to expiring leases of USDA agencies in the Washington, D.C. area.

STRATEGIC SPACE PLAN

In our efforts to help reduce costs associated with housing our employees, USDA is underway in implementing the long term plan to consolidate USDA Headquarters into two Government-owned locations which will provide modern and safe facilities and enhance USDA operations. This plan consists of two major projects—the Beltsville Office Facility and the modernization of the South Building. It is based on projected reductions in staff at the Washington Headquarters. In fiscal year 1997, the funding level for this plan is \$23,505,000; of which, \$5,000,000 is allocated to complete the Beltsville Facility and \$18,505,000 is allocated for the first phase of the

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South Building modernization. In fiscal year 1998 we are requesting \$5,000,000 which will be used to continue the South Building modernization. The fiscal year 1998 level is a one year reduction proposed in order to better coordinate funding with the anticipated project implementation schedule. Outyear projections assume funding at the fiscal year 1997 enacted level of \$23.5 million.

The Beltsville Office Facility, now under construction, is located on Government-owned land at the Beltsville Agricultural Research Center. This facility has been designed as a low-rise campus of four buildings with 350,000 gross square feet to house approximately 1,500 employees. Construction of the Beltsville Office Facility began in June 1996 by Tompkins Construction. The buildings are progressing on schedule and will be ready for occupancy starting in January 1998. Currently, we are in the process of determining which agencies will occupy the Beltsville Complex.

We are also developing a Transportation Management Plan which will provide for our employees detailed information on how to get to work. This plan will help employees make the necessary changes in their transportation, such as available bus, metro, parking, and carpool/vanpool locator assistance. As part of the construction, there will be about 900 parking spaces available for carpools and vanpools and a shuttle bus from the Greenbelt Metro station to the office facility. USDA is providing improvements to State and County roads in partnership with the State of Maryland and Prince George's County. We are making every effort to achieve a smooth transition for all USDA employees.

The second part of the Strategic Space Plan is the modernization of the South Building. The sixty-one-year-old Agriculture South building, eligible for listing on the National Register of Historic Places, is in dire need of repair and renovation to make it safe, efficient and functional. The required renovation work includes fire protection systems, abatement of hazardous materials such as asbestos, PCB light fixtures, lead paint, replacement of old, inefficient heating ventilation and air-conditioning systems, improved accommodations for disabled persons and accommodation of modern office telecommunications systems. The current plan is to modernize the building in eight primary phases and to consolidate USDA agencies into the modernized areas as each construction phase is completed. The first phase will include Wing 3. Funding for this phase was provided in fiscal year 1997. The architect-engineer contract to develop the concept design for the entire building and the contract documents for the modernization of Wings 3 and 4 was awarded in January, 1997. By the end of the South Building modernization project, USDA Headquarters offices will be consolidated into two locations, the Beltsville facility and the downtown Headquarters Complex, eliminating our reliance on leased space, which will result in considerable savings.

BUILDINGS OPERATIONS AND MAINTENANCE

An increase of \$4,491,000 in fiscal year 1998, over the 1997 level of \$20,294,000, is requested for Building Operations and Maintenance. Of these funds, \$2 million is for maintaining a healthy, safe working environment for USDA employees and customers at the new Beltsville Facility. Specifically, the increase will provide funds for onsite maintenance of mechanical and electrical equipment, elevators, landscaping, and security services as well as office cleaning, recycling, and other services considered routine to maintain a commercial facility. We anticipate that the facility will be occupied starting in January 1998.

The day after the bombing of the Alfred P. Murrah Building in Oklahoma City, the President directed the Department of Justice (DOJ) to assess the vulnerability of all U.S. Federal office buildings. The DOJ assessment and a subsequent risk assessment by USDA identified additional security measures, such as, surveillance and structural changes, needed to enhance the security of the four Headquarters buildings. Of the \$4,491,000 increase, \$1,000,000 will be used to provide for security upgrades to the Headquarters buildings to meet minimum security standards identified in the DOJ and USDA assessment and survey. Some of the upgrades include a security intercom system, an intrusion detection system, access control verification station, activation control gates, parking lot controls and installation of full height turnstiles at entrances. Additional funds are also included for increased operating costs and pay costs for maintenance of the Headquarters Complex.

RELOCATION EXPENSES

An increase of \$2,700,000 will cover the necessary one-time relocation expense due to expiring leases in the Washington, D.C. area. A GSA lease recompetition conducted in accordance with the Competition in Contracting Act resulted in six USDA agencies having to vacate two existing leased buildings. GSA is prohibited by law from incurring expense to replicate agencies' telephone, LAN, systems furniture, se-

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curity, compressed filing, and other miscellaneous equipment systems in the new locations.

HAZARDOUS WASTE MANAGEMENT

The safe disposal of hazardous waste is a challenge we must meet. We are now paying the cost of cleanups associated with environmental problems caused by the past disposal practices on our facilities but also primarily the activities of others on lands under the jurisdiction, custody or control of USDA. Of some 38,000 abandoned and inactive mines, we currently estimate 1,700 could require a Superfund cleanup. Up to 120 inactive or abandoned landfills are undergoing evaluation for Superfund cleanup. In addition, the USDA Commodity Credit Corporation leased grain storage bins throughout the mid-west that need to be evaluated, and cleaned up where drinking water and ground water supplies have been contaminated by our actions. The Department requests \$25,000,000 for the central Hazardous Waste Management program, an increase of \$9,300,000 over the 1997 level under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Resource Conservation and Recovery Act (RCRA) statutes.

Funding from this appropriation is allocated to agencies based on priority needs and made available until expended. The increase will facilitate the cleanup of abandoned mines and landfills, identify and clean up grain storage bins, and support other agency cleanup efforts throughout the Department. The additional funds will allow the agencies to complete more of the backlog of projects and provide funding for crucial work.

CONCLUSION

This concludes my statement, Mr. Chairman. I appreciate the opportunity to appear today and present this information, and I hope my comments have been helpful to you and the Committee. I will now be happy to answer any questions you or your subcommittee members may have at this time.

OFFICE OF SMALL AND DISADVANTAGED BUSINESS UTILIZATION

PREPARED STATEMENT OF SHARRON HARRIS, DIRECTOR

Mr. Chairman and members of the Subcommittee, I am pleased to discuss the fiscal year 1998 budget request for the Office of Small and Disadvantaged Business Utilization—OSDBU.

Our mission is very simple. OSDBU has the responsibility to increase the number of business opportunities available to small, small disadvantaged, and women-owned businesses; identify and eliminate barriers that prevent or severely restrict small business participation in providing goods and services to the agency; establish partnerships to promote the growth and competitiveness of the small business community; and provide Departmentwide leadership in the implementation and execution of programs under Sections 8 and 15 of the Small Business Act, as amended, as well as Executive Order 12432.

Established on June 26, 1979, OSDBU is statutorily tasked to foster and serve as advocate for the use of small, disadvantaged, minority, and women-owned businesses as Federal contractors. OSDBU is the Department's central point of contact for general inquiries from industry and the small business community, the Small Business Administration, and from Congress on issues relating to the small business preference program. OSDBU is also the Department's central repository for advocacy and information for all programs affecting USDA's procurement activities impacting the small business community.

To accomplish its mission, OSDBU conducts reviews of major USDA procurement programs, conducts outreach to the small business community, sponsors procurement conferences, evaluates subcontracting plans of major prime contractors, and provides counseling to small businesses.

Most small businesses that contact our office are usually seeking contracting opportunities. They expect this type of contact because of the nature of our mission. We serve as a liaison between the small business community and the appropriate USDA agency that would most likely use their products. Our intervention saves marketing time for the small business and gives contracting officials many qualified small businesses from which to select.

A constant challenge to any small business office is its ability to quickly and efficiently provide the small business community with timely contract and program information. To address this concern, we put into place the "OSDBU Online" World

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Wide Web Internet page in September 1996. OSDBU Online provides the small business community with a vehicle through which to access information concerning potential USDA contracting opportunities as well as USDA programs that support agricultural related businesses. Online hot links allows a small business to quickly navigate through a diverse assortment of USDA programs that support agribusiness, agricultural scientific research, product research and development, food processing, and exporting. USDA programs of interest to small and medium sized agribusinesses include the:

1. *Alternative Agricultural Research and Commercialization Centers—AARC.*—AARC is a joint venture between USDA and industry and assists small and medium size businesses in the commercialization of research results on non-food, non-feed products from farm and forestry materials. Assistance is usually in the form of investments in the small business project by USDA and industry. Since 1993, AARC-sponsored projects have resulted in the commercialization of products such as materials for building walls made from a mix of wheat straw and recycled plastic and insulation produced from milkweed.

2. *Trade Assistance and Promotion Office—TAPO.*—This office serves as the initial point of contact in USDA for all questions on agricultural trade.

3. *AgExport Connections Program.*—This program offers several low cost services which can help U.S. exporters contact foreign buyers. Among the services offered are: Trade Leads, Buyer Alert, Foreign Buyers Lists, and U.S. Suppliers List. For a small business seeking to enter the export market this service is invaluable.

4. *Market Assistance Program—MAP.*—This program assists U.S. Agriculture producers, exporters, and other trade organizations to finance promotional activities for U.S. agricultural products. MAP encourages the development, maintenance, and expansion of commercial export markets for agricultural commodities. Activities financed include consumer promotions, market research, technical assistance, and trade servicing.

5. *Export Enhancement Program—EEP.*—This program helps specified products produced by U.S. farmers better compete with agricultural products from subsidizing countries. Under the program USDA pays cash to exporters as bonuses, allowing them to sell specified U.S. products in targeted countries at prices below the exporter's costs.

6. *Small Business Innovative Research—SBIR Program.*—The SBIR program awards competitive grants to qualified small businesses for innovative, applied research and development on important agricultural problems. They aim these grants at the development of commercial products or services to provide significant public benefits. Research is supported in the areas of: 1) Forest and Related Resources, 2) Plant Production and Protection, 3) Animal Production and Protection, 4) Air, Water, and Soil, 5) Food Science and Nutrition, 6) Rural and Community Development, 7) Aquaculture, 8) Industrial Applications, and 9) Marketing and Trade.

OSDBU is proud of its venture into the arena of the World Wide Web and will continue to seek innovative ways to assist the small community to participate in all of USDA's programs. Incidentally, our address is <http://www.usda.gov/da/smallbus.html>. Our current, as well as, future efforts should increase small business participation and give USDA management officials an additional vehicle to promote USDA programs. We hope that our collaborative efforts to improve the comprehensiveness of our outreach will increase the small business community's interest in agribusiness.

FISCAL YEAR 1998 BUDGET REQUEST

For fiscal year 1998, OSDBU is requesting \$795,000 in direct appropriations. This request represents an increase of \$12,000 over the fiscal year 1997 appropriation. The increase consists of \$12,000 for pay costs.

As in the past, the Administration's request for OSDBU has been included within the bureau Executive Operations, whose activities, which include the Office of the Chief Economist, the National Appeals Division, and the Office of Budget and Program Analysis, have multi-agency or Department-wide impact—and which therefore reports directly to the Secretary and Deputy Secretary—rather than to a specific Under or Assistant Secretary.

Public Law 95-507 Section 15, of the Small Business Act (15 U.S.C. 644(k)) establishes in each Federal department and agency an OSDBU and requires that the Director of OSDBU "be responsible only to, and report directly to, the head of such agency or the deputy of such head." Further, on September 16, 1994, the President issued Executive Order 12928, "Promoting Procurement with Small Business Owned and Controlled by Socially and Economically Disadvantaged Individuals, Historically Black Colleges and Universities, and Minority Institutions," which directs each

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agency to comply with the Office of Federal Procurement Policy (OFPP) Letter No. 79-1 of March 7, 1979. The OFPP Letter provides implementation guidance for section 15k and the organizational placement and functions of OSDBU.

Due to the importance of OSDBU's Department-wide crosscutting and oversight function, we urge that the Committee provide funding under the bureau and account "Executive Operations."

Mr. Chairman, once again, I would like to thank you and members of the Subcommittee for this opportunity to discuss the fiscal year 1998 request for the Office of Small and Disadvantaged Business Utilization.

RELATED AGENCY

FARM CREDIT ADMINISTRATION

PREPARED STATEMENT OF MARSHA PYLE MARTIN, CHAIRMAN AND CHIEF EXECUTIVE OFFICER

Mr. Chairman and Members of the Subcommittee, I am Marsha Martin, Chairman and Chief Executive Officer of the Farm Credit Administration (FCA).

I will highlight the Agency's accomplishments during the past year and present FCA's budget request for fiscal year 1998. The FCA fiscal year 1998 Budget Justification and Supplement were previously submitted to the Committee. Before I present the budget request, I respectfully call to the Committee's attention the fact that FCA's administrative expenses are paid by the institutions it regulates or examines. The Agency does not receive a Federal appropriation. It is funded with assessments of Farm Credit System institutions.

Mr. Chairman, I am pleased to present you a fiscal year 1998 budget request that is more than \$3 million below the budget for fiscal year 1997. This 8.2 percent budget reduction demonstrates the Agency's commitment to its goal of enhancing effectiveness and cost efficiency. I emphasize, however, this in no way indicates any sacrifice of program effectiveness.

MISSION OF THE FARM CREDIT ADMINISTRATION

Our mission is to promote a safe and sound, competitive Farm Credit System (System or FCS) so that agriculture, rural America, farmers, ranchers and their cooperatives will continue to have a permanent source of farm credit in good times and bad. While we are not involved in the daily management of System institutions, FCA does ensure that the System complies with the law and regulations, and exercises safe and sound banking practices. In turn, the System's role is to improve the income and well-being of America's farmers and ranchers through the extension of sound, adequate, and constructive credit. We continue to be proud of our performance in carrying out our mission, and we are also pleased with the continuing progress the System is making in strengthening its financial condition.

CURRENT ACTIVITIES AND ISSUES

This past year, the Agency continued to reduce costs, streamline operations, and reduce regulatory burden. I am especially proud of the fact that FCA was able to accomplish these improvements without compromising its ability to oversee the safety and soundness of System institutions. We also continued to place a high priority on creating increasingly efficient and innovative examination and supervisory programs that met our needs, as well as those of our customers. For example, examination resources are deployed on the basis of the level of risk in each institution. Off-site examinations are conducted on low-risk institutions. In 1993, when this program began, we completed six off-site examinations. This grew to 96 off-site examinations in 1996.

We also have established a quality assurance program to ensure that quality control in the examination process is maintained as we close regional offices and streamline operations. Our Office of Examination has instituted several internal projects to improve operating efficiency and to enhance risk evaluation. One of these projects currently is evaluating ways to directly access loan account information systems at FCS institutions. A related project establishes a uniform system to identify and respond to deteriorating trends in highly-rated institutions. These projects could improve significantly the Agency's ability to foresee and counteract risks to the System.

I would like to briefly highlight some of the Agency's additional major accomplishments during the past year.

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- The Board adopted a policy statement on association structure that provided greater flexibility for associations seeking to merge and to those associations affected by the mergers.
- The Board adopted a policy statement on disaster relief efforts, encouraging System institutions operating in disaster-affected areas to work to alleviate pressures on borrowers under stress.
- Regulatory burden was reduced by eliminating several policy statements, developing new guidelines for issuing bookletters, and identifying regulations that can be revised by incorporating them into new or existing regulation projects. Also, to promote more participation in the rulemaking process, the Agency published an Advance Notice of Proposed Rulemaking on two occasions, seeking comments on prospective regulations.
- This past January, the Board adopted final regulations concerning customer eligibility and stricter capital standards for FCS institutions.

The previous customer rule had not been updated in 25 years, and it imposed many restrictions not required by law. Coupled together, the new customer and capital regulation strengthens financial standards and helps ensure a continuing, competitive source of credit for agriculture and rural America in good times and bad. I personally believe that the mission of the Farm Credit System to finance the needs of American agriculture is as vital and important today as it was when the System was first established. It is critical to this great nation that agricultural producers continue to have a choice as to where they obtain their credit to buy their farms and plant their crops.

Primary regulatory projects currently under review by the Agency will further reduce the burden of FCA's regulations while continuing to ensure safety and soundness of System institutions. For example, the FCA Board:

- Proposed regulations that would clarify loan underwriting guidance and provide flexibility where appropriate.
- Proposed regulations addressing policies and procedures for establishing a funding relationship between the Farm Credit Banks and their affiliated direct lending institutions. The proposed regulations would eliminate existing FCA prior approvals and provide uniform guidelines on which the general financing agreements will be developed and executed.
- Plans to clarify existing policies and procedures for establishing and maintaining the funding relationship between Farm Credit System banks and other financing institutions.

Staff is conducting an ongoing review to identify and provide recommendations to dispose of unnecessary policies, regulations, bookletters, and other forms of guidance. In addition, the FCA Board has requested an ongoing evaluation of existing statutes, as appropriate.

A major development in 1996 was the implementation of a Five-Year Staffing and Structure Plan (Staffing Plan). This effort was completed in response to my request for a comprehensive study of FCA's organizational, functional and staffing requirements. It has positioned the Agency to move smartly into the next century with the right mix of positions and talent to accomplish the Agency's mission and strategic plan. The elements of the plan include restructuring several offices, creating a new Office of Policy Development and Risk Control, reducing Agency staffing levels by 10.5 percent, eliminating the regional offices in the Office of Examination, and the closing of two field offices in fiscal year 1997. Since the Staffing Plan was implemented, total FCA staff has declined by 48 full-time equivalents (FTE's). The Agency's staffing level today is 328, and it will be down to 314 by July 1, 1997.

During fiscal year 1996, we continued to develop performance measures for Agency operations as part of our emphasis on operating FCA as a well run business. We are committed to strategic planning and performance measures as good business practices. As part of this project, the Agency researched performance measures concepts; benchmarked other Government agencies, as well as a private company; and devised a strategy to develop and implement performance measures at FCA. These measures closely track the goals included in the Agency's strategic plan.

In the area of operational efficiencies, this year the Agency essentially completed its migration to a client/server architecture with the installation of services to every office and employee; configuration of internet service; and installation of more than 10 major applications such as Lotus Notes databases for regulations, Agency correspondence, and workgroup information sharing.

CONDITION OF THE FARM CREDIT SYSTEM

Mr. Chairman, I am pleased to report that the Farm Credit System has continued to make progress in regaining its financial strength. During 1996, its earnings

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reached \$1.2 billion. Total System capital increased to \$10.6 billion at the end of 1996, which represented 14.1 percent of total assets. Total capital was 13.6 percent of total assets at yearend 1995. The quality of System assets also continues to improve. Nonperforming assets comprised only 1.6 percent of total loans and other property owned at the end of 1996, down from 2 percent a year earlier. Overall loan volume climbed by \$2.6 billion during the year.

The strengthened financial condition of the System is reflected by improved CAMEL ratings—the Agency’s evaluation of an institution’s capital, asset quality, management, earnings, and liquidity. With a 1 being the best rating, the percentage of System institutions rated 3, 4, or 5 dropped from 36 percent at the end of 1992 to only 5 percent on December 31, 1996. The number of System institutions under enforcement action also declined substantially, from 65 at December 31, 1992, to 6 at December 31, 1996. These 6 institutions accounted for only 1 percent of the System’s total assets, as compared with 55 percent of the System’s total assets represented by the 65 institutions under enforcement action at the end of 1992.

Mr. Chairman, we congratulate the Congress on the enactment last year of the Farm Credit System Reform Act of 1996 (Reform Act) which provided some statutory relief to System institutions. Among other measures, it extended the mandatory examination cycle from 12 to 18 months for most System institutions and repealed a provision requiring a separate Board of Directors for the Farm Credit System Insurance Corporation. Both of these measures translates directly into cost savings for the System.

FEDERAL AGRICULTURAL MORTGAGE CORPORATION

FCA has oversight responsibility for the Federal Agricultural Mortgage Corporation (Farmer Mac). The provisions of last year’s Reform Act removed some hindrances to Farmer Mac’s operational flexibility and competitiveness and have improved its business prospects. Specifically, the Reform Act gave Farmer Mac the authority to purchase loans directly from lenders and assemble its own loan pools; eliminated the required 10 percent subordinated interest; and established new capital standards and granted limited forbearance from these standards. For 1996, Farmer Mac showed a net profit of \$775,000, its first profitable year. Farmer Mac also had a successful stock subscription of nearly \$32 million, allowing it to exceed the \$25 million capital level required by law by February 1998. In conjunction with the Treasury Department, FCA is monitoring the operations and the financial condition of Farmer Mac. Periodic and timely reports are provided to Congress. FCA also has approved proposed regulations that would govern a Farmer Mac conservatorship or receivership, as required by the Reform Act, should one become necessary. In addition, we have begun work on the risk-based capital standards required by the Reform Act.

FISCAL YEAR 1998 BUDGET REQUEST

Mr. Chairman, after reporting on recent events and accomplishments of the Agency, I now propose a budget of \$34.4 million for fiscal year 1998. As I pointed out earlier, this amount is \$3.1 million, or 8.2 percent, less than the \$37.5 million presented to the Committee for fiscal year 1997.

We continue our commitment to FCA’s effectiveness and cost-efficiency. We regularly review how further progress can be made in meeting this objective. For example, on October 11, 1996, the FCA Board approved budget revisions that are projected to bring Agency fiscal year 1997 spending to \$35.9 million, \$1.6 million less than the amount proposed to this Committee a year ago.

Our fiscal year 1998 budget request reflects a reduction of FTE’s from the 357 in the fiscal year 1997 budget to 309. This is substantially below the Office of Management and Budget’s established target of 408 FTE’s for the Agency by fiscal year 1999. It also represents a reduction in Agency staff by nearly one third from the 450 FTE’s in fiscal year 1993.

We continue to be proud of our accomplishments as the safety and soundness regulator of the Farm Credit System. And in keeping with our discussion of the budget, we are also proud that we continue to hold the line on costs while achieving our mission.

Mr. Chairman, we welcome any questions you might have.

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QUESTIONS SUBMITTED BY SENATOR COCHRAN

BUDGET REQUEST

Question. The fiscal year 1998 budget proposes an increase of \$289,000 for equipment upgrades and information technology. Does FCA have a long term plan to upgrade hardware and software?

Answer. The FCA has a five-year Strategic Plan for Information Resources Management (IRM). One of the goals within the IRM plan is to provide for the continued delivery of an appropriate technology infrastructure for the FCA. One of the Agency's strategies to meet this goal is to continuously define and implement standards and systematically replace obsolescent technology. Generally, we are replacing hardware investments in a three to five-year life-cycle. The proposed budget provides the funds to meet FCA's systematic replacement needs.

STAFFING PLAN

Question. The fiscal year 1998 budget notes state that a 11.1 percent decrease in staff will occur for fiscal year 1998. How many full-time equivalents does this percentage represent? Please provide the number of full-time equivalents in each year of the five year staffing plan.

Answer. The 11.1 percent decrease represents a reduction in personnel compensation dollars. The fiscal year 1997 original budget included \$31,552,000 for personnel compensation, compared to \$28,624,000 in the fiscal year 1998 proposed budget. The difference of \$2,928,000 included -\$4,165,926 (11.1 percent) due to a reduction in full-time equivalents (FTE's), as well as an increase of \$1,237,926 for pay-for-performance increases and increased benefits for a veteran work force. The FTE's are estimated to decrease by 47.1, or 13.5 percent, from 356.5 in the fiscal year 1997 original budget to 309.4 in the fiscal year 1998 proposed budget. The number of FTE's in the five-year Staffing and Structure Plan is as follows:

<i>Fiscal year</i>	
1996 actual	361.4
1997 original	356.5
1997 revised	329.6
1998 proposed	309.4
1999 estimate	301
2000 estimate	293

It should be noted that the FTE's in the out-years are estimates and may change as strategic and operating plans are approved in the future or as conditions change.

CAPITAL STANDARDS

Question. When does the Agency predict that the risk-based capital standards will be implemented?

Answer. The new regulations on capital adequacy for Farm Credit System (FCS or System) institutions became effective on March 11, 1997. Separate capital regulations will be developed for the Federal Agricultural Mortgage Corporation (Farmer Mac) as required by the Farm Credit System Reform Act of 1996 (Reform Act). However, the Reform Act does not permit the FCA to publish proposed risk-based capital regulations for Farmer Mac prior to February 1999. Because this will be a complicated rule, we have already begun research toward its development. We anticipate publication of the regulation as soon as the statute permits, and the regulation should become effective in late 1999.

FARM-RELATED SERVICE BUSINESS LOANS

Question. Has the Agency implemented the new provision that would allow any company unlimited access to Farm Credit loans if more than 50 percent of its services are "agriculture-related?" How many companies have applied for loans and how many have been rewarded?

Answer. The amendments that revised FCA's rule on financing farm-related service businesses became effective on March 11, 1997. Both before and after these amendments, eligibility for financing under titles I and II of the Farm Credit Act of 1971, as amended, is limited to those businesses providing services to farmers and ranchers that are directly related to their agricultural production. Under the new provision, a firm that derives more than 50 percent of its annual income from furnishing such farm-related services may receive financing for all of its "farm-related business activities." This authority is restricted. At no time can services or goods

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that are not related to the agricultural production of farmers or ranchers be financed under the farm-related business authority.

The FCA does not have data on the number of companies that have applied for farm-related service business loans. While the Agency does collect loan data from each FCS institution on a quarterly basis, the data on loan purpose does not provide sufficient detail to determine whether a loan would have been authorized under the new provision but not the old. These data could only be obtained through an inspection of the individual loan files, which are located throughout the United States in the over 220 privately-owned lending institutions comprising the FCS. However, loans for farm-related service businesses historically have been a very small part of Farm Credit lending and comprised less than 1 percent of the FCS portfolio as of yearend 1996.

STATUS OF LAWSUIT

Question. What is the status of the suit filed against FCA by two banking organizations asking for a permanent injunction against the rules which expand the FCA's customer base?

Answer. On April 9, 1997, the Independent Bankers Association of America and the American Bankers Association filed suit in the United States District Court for the District of Columbia seeking to overturn several provisions of FCA's new customer eligibility regulations. Pursuant to an agreement of the parties, FCA's response to the Complaint is due to be filed by July 3, 1997. The FCA Board continues to believe that the Court will confirm that the FCA was well within its statutory authority in promulgating the new regulations.

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AGRICULTURE, RURAL DEVELOPMENT, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1998

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

NONDEPARTMENTAL WITNESSES

[The following testimonies were received by the Subcommittee on Agriculture, Rural Development, and Related Agencies for inclusion in the record. The submitted materials relate to the fiscal year 1998 budget request for programs within the subcommittee's jurisdiction.]

PREPARED STATEMENT OF JOHN A. WAITS

Mr. Chairman, Members of the Subcommittee, my name is John A. Waits. I am submitting this statement for consideration on behalf of the ad hoc coalition,¹ supporting increased funding levels above those proposed in the President's fiscal year 1998 budget request for Food for Peace title I concessional credit sales and the Food for Progress Program. We would appreciate the inclusion of this statement in the hearing record.

The administration proposes a rescission of \$50 million from the amounts appropriated for title I credit sales and the Food for Progress Program. The effect of this proposed rescission would be to reduce commodity shipments by some 200,000 metric tons. Moreover, the administration's proposed budget for fiscal year 1998 would further reduce next year's title I sales to \$123 million and provide for shipment of only 600,000 metric tons of grain equivalent. This is sharply down from \$290 million in title I credit sales funded in fiscal year 1996.

These severe program reductions are proposed because times are good, unmarketable commodity surpluses are gone, and U.S. agricultural export markets are strong. This approach, however, is very shortsighted. The good times may not last forever, the need for new export markets remains undiminished, and Food for Peace title I stands unchallenged as a highly successful export market development and food assistance program.

As we will demonstrate below, the United States now has an almost unparalleled opportunity to employ title I concessional sales not only to alleviate hardship and overcome temporary food shortages in developing countries, but also to develop and expand export markets for U.S. agricultural commodities. The United States, without question, should seize that opportunity. Those new markets, particularly in Eastern Europe and the former Soviet republics, will be urgently needed in future years.

THE HISTORICAL SIGNIFICANCE OF TITLE I

American agriculture, in 1996, had a great year. Gross farm income exceeded \$230 billion, an all-time record, and net farm income for the first time exceeded \$50

¹The ad hoc coalition is composed of the USA Rice Federation, the National Association of Wheat Growers, the National Cotton Council of America, the National Council of Farmer Cooperatives, the American Soybean Association, the American Maritime Congress, the Maritime Institute for Research and Industrial Development, the Transportation Institute, Gulfcoast Transit Company, and Liberty Maritime Corporation.

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billion. Our exports were valued at approximately \$60 billion—another record—and those sales represented 28 per cent of total farm cash receipts for crops and livestock. As world agricultural trade approaches \$250 billion, the U.S. share of this global market is about 23 per cent—up by more than one-third since 1986.

There is no doubt that the current prosperity of American agriculture is directly dependent upon continued access to foreign markets. Our success in promoting agricultural exports permitted Congress to enact the 1996 Farm Bill, a landmark measure that affords farmers freedoms unprecedented in modern times. Our prospects appear good now, but they could change. Prudence dictates that we evaluate how we came to this good fortune, then build upon our past achievements to ensure continued success.

The U.S. agricultural export markets of the 1990's could not have been captured without the dedicated efforts and outstanding productivity of America's farmers. Our producers met every challenge before them, but they still needed export assistance. One highly successful initiative has been the Food for Peace program, especially the title I credit sales program. It is difficult to overstate the historical significance of Public Law 480, the Agricultural Trade Development and Assistance Act of 1954. Title I of Public Law 480—the focus of this statement—provides for U.S. government financing of sales of U.S. agricultural commodities to developing countries on concessional credit terms. Under current law, the concessional terms include a maximum 30-year period for repayment, with a grace period of up to five years and below-market interest rates.

The title I program has been an essential element in the overall development of strong export markets for American agriculture. When Public Law 480 was enacted in 1954, the total value of all U.S. agricultural exports was extremely low—about \$3 billion per year. The title I program, of course, had an immediate impact: until the mid-1960's, title I shipments accounted for about 20 percent of the annual value of all U.S. agricultural exports. Until overall exports quickly doubled in the mid-1970's, title I shipments continued to represent more than five per cent of all agricultural exports. As recently as fiscal year 1990, moreover, title I export values regularly exceeded \$700 million.

Title I's enduring legacy is underscored by the fact that of the top 50 countries which are significant markets for U.S. agricultural exports, 41 of them were once recipients of title I program assistance. Of course, not every title I country has graduated to become a major commercial market for U.S. agricultural products. India, for example, received considerable food assistance under title I, but remains an insignificant commercial market today. Other countries, however, have become good trading partners: South Korea, for example, purchased \$3.7 billion worth of U.S. agricultural products last year, an amount that exceeds the total value of U.S. sales worldwide in 1956. The Philippines and Indonesia are now each importing more than \$900 million worth of U.S. agricultural products annually, and exports to Egypt exceed \$1.5 billion in value. The title I program in Latin America has proven fruitful: Brazil and Colombia have each become \$600 million markets for American agriculture, while Peru has increased annual purchases from U.S. farmers to nearly \$400 million.

Thanks to title I and other factors, U.S. farmers have made major gains in scores of countries around the world. But not only have our farmers benefited. Over four decades, Food for Peace program shipments have provided a consistent market for U.S. commodity suppliers, promoted the development of the inland waterway system, provided substantial traffic for barge operators and railroads, encouraged port development and modernization, and provided employment opportunities and cargoes for the U.S. merchant marine. In short, title I has been very good for America—and its best days may be yet to come.

RECENT TITLE I GRADUATES

Unfortunately, the Food for Peace Program, in title I, has suffered greatly in recent years. From nearly \$750 million in 1990, title I allocations have declined in fiscal year 1997 to \$205 million for 21 countries. We would encourage this committee to reject the rescission proposal, and direct the Department of Agriculture to allocate the remaining \$50 million available from prior year appropriations.

Despite severe budgetary limitations, title I has remained vital in the 1990's. Since 1989, at least eight countries have graduated out of title I concessional credit sales into the GSM program. These are Costa Rica, Croatia, Egypt, Estonia, Latvia, Morocco, Poland and Tunisia. In addition, Armenia and Georgia have graduated from Food for Progress to title I participation, and Bolivia and Guyana reportedly will rely in the future on title I, rather than on title III grant assistance, as in the past.

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In 1996 one-half of the title I program was allocated to 10 countries of the former Soviet Union and the Eastern Bloc. The remaining one-half was allocated around the world to countries with real humanitarian needs, where prospects for future commercial sales are bright. The 1997 allocations follow this same pattern: from the former Soviet Union and the Eastern Bloc, seven countries will receive allocations, while 14 other countries around the world will also share in the program.

THE FUTURE ROLE OF TITLE I

In its Budget Summary for fiscal year 1998, the Department of Agriculture reports that "the importance and role of the title I program in the Department's overall long-term market development strategy has increased." The Department complains that title I's former placement in the international affairs function "has contributed to reduced funding" for the program. We are pleased the Department is committed to title I's "continued viability," for the greatest challenges and opportunities under title I may lie just ahead.

The Food for Peace Program had an important role in the Cold War era. The United States, for humanitarian and geopolitical reasons, became the world's leading food aid supplier. We remain so today: through the 1990's, the United States has supplied more than one-half of all food assistance provided by all the world's donor countries. This is a proud record of achievement, one that we must maintain through continued commitment and no cutbacks in funding for titles I, II, and III of Food for Peace, and other food aid programs.

In the post-Cold War era, title I and Food for Progress have significance far beyond any dollar-levels associated with the programs. These concessional programs, quite simply, will be America's ticket of admission into new markets for U.S. agricultural exports that could approach or exceed the present market in Western Europe. The new markets lie in Central and Eastern Europe and the former Soviet Union. Today Western Europe accounts for more than \$9.5 billion in U.S. agricultural exports. Eastern Europe and the former Soviets account for about \$2 billion, including title I and Food for Progress shipments.

The population of this region is comparable to Western Europe's, their prospects for recovery are improving, and their natural resources are abundant. Only the farmland throughout much of the region is poor. In 20 years or less, the Eastern Europeans and former Soviets will represent a major market for agricultural products. The United States should do everything possible to position itself competitively as a major supplier in that market. One important step is to enhance commitments to title I, and to promote the program aggressively throughout this emerging market region.

THE COMPETITIVE CHALLENGES AHEAD

USDA's Economic Research Service reported in December 1996 that "U.S. corn exports are projected to drop 12 percent in 1996/1997," and that increased shipments from Argentina and Canada will reduce U.S. coarse grain exports to the "lowest level since 1993/94." The ERS also stated that "U.S. wheat exports are projected to decline 23 per cent from 1995/96, despite greater U.S. production." One reason cited: "Global wheat production for 1996/97 is currently projected to be the second highest on record." On a brighter note, increased Chinese demand will boost U.S. exports of soybeans, despite increased global shipments from Argentina and Brazil.

Neither Congress nor farmers can rest on their laurels. The challenges of the global marketplace are increasing, and no market is completely secure. According to Dennis Avery of the Hudson Institute, "Brazil could open up more than 100 million acres of unplanted arable land in its southwestern Cerrado Plateau. * * * Brazil has pioneered new acid-tolerant varieties of soybeans, corn, and wheat, which now make the region a prime prospect * * *." Mr. Avery reports "Argentina could at least double its crop production * * * It is pasturing cattle on some 75 million acres of the finest cropland in the world * * *. Bolivia's eastern lowlands have long been known to have 60-75 million acres of unplanted arable land * * *."

The agricultural potential of Latin American countries is simply staggering: they lack only infrastructure, primarily port and rail facilities, to become competitive with U.S. farmers in every global market. That infrastructure could be built in less than a decade.

CONCLUSION

Title I remains a key instrument of trade development policy, even as it also serves as an important food assistance program. Together with title I's vital role in Central and Eastern Europe and the former Soviet Union, this Food for Peace Pro-

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gram continues to have relevance and significance in developing countries around the world.

Mr. Chairman and other Members of the Subcommittee, the ad hoc coalition respectfully asks that appropriations for title I of Food for Peace be maintained in fiscal 1998 at funding levels not less than those provided in fiscal 1997. Furthermore, we urge that any rescissions be disapproved, with instructions to the Department to allocate fully all appropriated monies for the program.

Thank you very much for your consideration of our views. We look forward to working with the Subcommittee on this important issue.

PREPARED STATEMENT OF THE AMERICAN ASSOCIATION OF NURSERYMEN

Mr. Chairman, the American Association of Nurserymen (AAN) welcomes this opportunity to present the nursery industry's views regarding the fiscal year 1998 (fiscal year 1998) Budget for the U.S. Department of Agriculture (USDA).

AAN is the national trade association for the nursery and landscape industry. AAN represents 2,000 production nurseries, landscape firms, retail garden centers and horticultural distribution centers, and the 16,000 additional family farm and small business members of the state and regional nursery and landscape associations.

ECONOMIC SIGNIFICANCE OF THE NURSERY INDUSTRY

According to USDA's Economic Research Service (ERS), the nursery and greenhouse industry remains the fastest growing agricultural sector in cash receipts. In 1969, an estimated 18,000 farms (or 1 percent of all farms) were engaged in producing at least some nursery and greenhouse crops. By 1992, an estimated 47,425 farms were included in this sector. In 1994, nursery and greenhouse crops totaled an estimated \$10.04 billion in farm-gate value, representing 11 percent of the total cash receipts for all U.S. farm crops.

Nursery and greenhouse crops in 1994 ranked 6th in total grower cash receipts among all agricultural commodities. It is the third largest plant crop—behind corn and soybeans, but ahead of wheat, cotton, and tobacco. Nursery and greenhouse crop production now ranks among the top 5 agricultural commodities in 27 states, and among the top 10 in 43 states. USDA data from 1990 also found that nursery and greenhouse farms had the highest average net farm income of all agricultural commodity groups at \$53,589. This was four times higher than the average American net farm income in 1990 of \$13,458. Although nursery farms can be profitable, they are often more capital intensive than other agricultural operations, and are very labor intensive given the thousands of different plant species and the wide-ranging sizes in which they are grown.

AGRICULTURAL RESEARCH SERVICE (ARS)

Noting the increasing economic significance of the nursery and greenhouse industry, AAN is very grateful and pleased that Congress provided \$200,000 to ARS in fiscal year 1997 specifically to address the important research needs of the nursery and greenhouse industry. It is AAN's full intention to build upon that foundation of Congressional support. AAN and the Society of American Florists (SAF) are jointly developing a detailed proposal establishing a coordinated research initiative for the nursery and floral industry. To underscore this cooperative spirit, AAN fully supports and endorses the testimony which SAF presented to this Committee last week.

While AAN was very pleased that Congress provided \$200,000 in fiscal year 1997 for nursery and greenhouse industry research needs, we are deeply disturbed that the Administration has failed to provide for a continuation of these research dollars in fiscal year 1998. Apparently, the Administration is proposing to redirect a total of \$23 million from research projects funded by this Committee in fiscal year 1997. AAN respectfully urges Congress to restore in fiscal year 1998 the 5200,000 funding which serves as an encouraging foundation for the joint research initiative that the nursery and floral industry is currently developing.

Although recognition of the economic significance of the nursery industry is indeed increasing, very few federal dollars are dedicated directly to the nursery and greenhouse industry. In fact, only about 0.02 percent of all federal agricultural research dollars are currently so dedicated. This underscores why last year's provision of \$200,000 is so important. Current competitive grant programs and other public funding mechanisms are unable to meet the industry's research needs. The nursery

and greenhouse industry has an exemplary record of supporting its own research needs as industry-funded research grants annually total several million dollars.

The industry will continue to support research efforts through its own privately funded research foundations, including AAN's very own research division (the Horticultural Research Institute) which is providing \$280,000 in research grants this year alone. The federal government must play a research role more appropriate to its scope. It must retain the lead in developing basic building blocks of plant science, in contrast to the industry's applications of those blocks to build solutions to its particular challenges. It is important to note that both the Northwest Nursery Crops Research Center in Oregon, and the Nursery Crops Research Station in Tennessee, play such integral regional roles for our industry's research needs. The federal role in research is longer term, cuts across multiple disciplines, calls for extensive coordination among scientists and institutions, and involves higher risk than can be undertaken by any one industry.

As noted above, and in cooperation with ARS, the nursery and floriculture industry are jointly developing a detailed proposal establishing a coordinated research initiative. The goals of this initiative are to:

- Protect the environment, including human health and safety through research leading to reduced use of chemicals and to reduce runoff and other wastes.
- Maintain biodiversity through germplasm preservation, so that useful botanic traits may be transmitted to future generations.
- Enhance environmental remediation and cleanup efforts on wetlands, post-industrial sites, air quality, and other environmental areas through research on the ability of plants to reverse and mitigate environmental pollution.
- Improve rural and suburban economies across the U.S. by providing improved crop production systems and technologies to nursery and greenhouse crop growers and by helping them to increase production efficiency.
- Contribute to the U.S. agricultural economy and to increase international competitiveness by conducting research leading to improved nursery and greenhouse products and production strategies, and by improving technology transfer of research results to benefit other U.S. agricultural sectors.
- Improve Americans' quality of life through increased availability and diversity of plants and flowers for the consumer.

The joint industry research initiative will accomplish these goals by focusing research on three essential areas: (1) improved environmental and resource management; (2) improved pest management; and, (3) improved production system practices and strategies. AAN will endeavor to keep this Committee informed of the progress of this emerging joint research initiative.

Methyl Bromide

As a widely used fumigant, methyl bromide is a critical input to many nursery crop management and quarantine systems. However, the U.S. Environmental Protection Agency has listed methyl bromide as a Class I ozone-depleting substance under the Clean Air Act and will ban its use by January 1, 2001. Research and development of effective methyl bromide alternatives for soil fumigation and quarantine treatments are absolutely critical to the nursery industry. Effective alternatives to methyl bromide must be identified. Therefore, AAN urges Congress to direct additional, specifically targeted funding for USDA research into methyl bromide alternatives. AAN also urges Congress to direct USDA to continue to work with the Crop Protection Coalition (of which AAN is a member) in determining how these critical research dollars are employed.

U.S. National Arboretum

When it was founded in 1927, Congress had the foresight to designate research and education as the mission of the U.S. National Arboretum. Since its founding, the National Arboretum has introduced over 200 important new cultivars, including azaleas, New Guinea impatiens, crepe myrtles, hollies, magnolias, and disease resistant elms. The nursery industry has immense respect for this highly successful federal institution and for the Friends of the National Arboretum (FONA), which is the non-profit, private sector organization whose mission is to garner additional resources to advance the quality and scope of the National Arboretum's activities. AAN fully supports and endorses the testimony which FONA presents before this Committee.

ANIMAL AND PLANT HEALTH INSPECTION SERVICE (APHIS)

International and interstate trade in nursery crops is governed by inspection and quarantine regulations designed to prevent or slow the artificial spread of hazardous agricultural pests. APHIS works in cooperation with state departments of agri-

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culture to promulgate and enforce such regulations. AAN strongly supports APHIS' request for adequate program funds for safeguarding plant resources from exotic pests and diseases. The continued growth and success of the nursery industry, and all of American agriculture, depend on these vital APHIS programs.

Agricultural quarantine inspection (AQI)

Port-of-arrival inspections and first-class mail inspection under the AQI program are the first line of defense against damaging pest introductions. About 80 percent of the funding for this important program comes from user fees levied broadly across international travel and commerce.

APHIS does not currently collect user fees associated with commerce and travel from Canada to the U.S. Given the risks demonstrated in recent years of movement of such pests as exotic fruit flies into the U.S. from Canada, APHIS might consider whether collection of user fees on goods moving from Canada would allow for enhanced pest exclusion efforts along the U.S./Canada border.

Pest and disease management

The Administration's budget seeks about \$80 million for pest and disease management programs in fiscal year 1998. These programs provide funding for critically important survey and management for a wide range of pests, including imported fire ant and gypsy moth. However, AAN notes that APHIS plans to discontinue funding for the imported fire ant quarantine. The fiscal year 1997 funding level of \$1 million represented only 27 percent of the funding level three years ago, yet the workload associated with the quarantine has increased as the pest has continued to spread. AAN respectfully urges Congress to direct APHIS to maintain imported fire ant funding at the fiscal year 1997 funding level of \$1 million. The small federal funding share is used to carry out cooperative efforts with infested states in the South and Southeast. Continued federal involvement strengthens the level of protection of uninfested states, and ensures a fair, consistent framework for domestic commerce for nurseries located in the 11 affected states from North Carolina through Florida and west to Texas.

Chrysanthemum white rust

Chrysanthemums are an important nursery and greenhouse crop. Annual farm-gate value of the U.S. chrysanthemum crop is about \$160 million. Chrysanthemum white rust (CWR), a serious disease of chrysanthemums not known to be established in the U.S., was discovered in 1995 in California, Oregon and Washington. During fiscal year 1995 and fiscal year 1996, APHIS and state cooperators engaged in CWR detection survey, control and regulatory activities with these states. Yet, this level of funding has been inadequate to yield a comprehensive understanding as to whether eradication efforts have succeeded. Future regulatory decisions must be based on sound, comprehensive information. AAN respectfully urges Congress to direct that APHIS: (1) cooperatively fund completion of thorough detection surveys in fiscal year 1997/98; and, (2) evaluate eradication program success based on survey results.

Plant pest emergency fund

In recent years, emergencies have been declared as a result of discovery of such devastating pests as Karnal bunt of wheat, Asian gypsy moth, and Mediterranean fruit fly. The long-term benefits of successful eradication efforts far outweigh the short-term costs of emergency programs to eradicate such pests. However, such efforts require rapid response and adequate resources. AAN supports the establishment of a "no-year" emergency agricultural pest fund that could be accessed at the sole discretion of the Secretary of Agriculture in the event of pest emergencies. Such a fund should be adequate to deal with multiple emergencies, and should be replenished as needed.

COOPERATIVE STATE RESEARCH, EDUCATION AND EXTENSION SERVICE

Pesticide clearance

AAN strongly supports the Administration's fiscal year 1998 budget proposal of \$10.7 million for the IR-4 program under the USDA-CSREES Special Research Grants Program. This represents a \$5 million increase over fiscal year 1997, which is needed and justified in view of the new requirements of the Food Quality Protection Act (FQPA) passed by Congress in 1996. FQPA requires the reassessment of virtually all pesticide dietary tolerances over the next 10 years—an enormous task that will require comprehensive IR-4 support. Together with USDA-ARS funding, this would increase IR-4 funding to \$12.8 million for 1998.

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The IR-4 program has achieved unparalleled success in facilitating the registration of minor-use crop protection tools, including biopesticides and other reduced-risk pesticides. While most IR-4 projects focus on minor-use food crops, to date, the program has generated crucial data supporting uses of most products registered for nursery and greenhouse use. The program's successes are being leveraged by private industry resources as well. In 1996, AAN led a successful effort to raise \$20,000 to fund a workshop where key nursery and floral researchers prioritized production problems and critical pesticide registration needs. This effort was also supported by AAN's research division, the Horticultural Research Institute, as well as by the American Floral Endowment and the Society of American Florists.

Higher education

The nursery industry is concerned about the apparent loss of teaching instruction in basic horticulture at some land grant schools. AAN supports the \$10 million allotted for higher education and urges Congress to encourage CSREES to utilize a portion of such funds so that horticulture teaching capability is maintained at land grant schools.

OFFICE OF THE DEPUTY SECRETARY

FQPA implementation

As noted above, the passage of the Food Quality Protection Act of 1996 (FQPA) has substantial impacts on the agricultural community, particularly so-called minor use specialty crops such as those produced by the nursery and greenhouse industry. AAN believes it is imperative that USDA engage with the Environmental Protection Agency (EPA) in the implementation of FQPA. USDA should serve as a spokesperson to EPA regarding the potential impacts of different policy choices considered by EPA otherwise agriculture, and the nursery industry, will suffer.

There are other provisions of FQPA which require USDA action. For example, the law requires USDA to coordinate all its various internal agency actions involving pesticides. Currently, there is no structure in place to achieve this. AAN urges Congress to establish a structure in the Secretary's office, preferably under the auspices of the Deputy Secretary, to address these issues. This is a necessary first step to USDA carrying out its full and proper role in the implementation of FQPA.

NATIONAL AGRICULTURAL STATISTICS SERVICE (NASS)

AAN strongly supports the Administration's proposed budget for the 1997 Census of Agriculture. Furthermore, AAN urges Congress to specifically direct NASS to assure funding of the decennial 1998 Horticultural Specialties survey which follows the 1997 Census of Agriculture. The nursery industry statistics provided by these projects are not available from any other source, nor could they be objectively and successfully generated by anyone other than the federal government. In addition, AAN strongly supports expansion of the labor statistics gathering of NASS as part of the Horticultural Specialties survey. As the industry's single greatest production expense, labor is key to our ability to move into the future, while attracting, training and retaining employees.

ECONOMIC RESEARCH SERVICE (ERS)

The nursery industry relies heavily upon the agricultural economic analyses produced by the Economic Research Service (ERS). In fact, ERS is this nation's sole source of such comprehensive nursery industry analyses. The availability of these economic analyses of statistical data generated by the Census of Agriculture, Horticultural Specialties Survey, and other sources, continues to be strikingly deficient for the nation's sixth largest agricultural commodity group.

AAN deeply appreciates the past support provided by Congress for the continued support of economic analyses of the nursery and greenhouse industry. Despite this Congressional support, AAN remains concerned that ERS may choose to ignore both the Congressional support and the nursery industry's demonstrated need for a continuation of these economic analyses. Therefore, AAN urges Congress to earmark \$240,000 in USDA's fiscal year 1998 funds and direct ERS to continue conducting its on-going economic analyses of the size and scope of the nursery and greenhouse industry. AAN respectfully requests Congress to ask ERS for a study of both national and international trade flows of the nursery industry.

CONCLUSION

In closing, Mr. Chairman, AAN is mindful of the budget constraints faced by this Committee. Yet, we believe that federal funding of the kinds of activities supported

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in our testimony is not only justified, but necessary, if the nursery industry is to continue to prosper and to play its increasingly significant part of our nation's economic strength. As in past years, AAN genuinely appreciates this opportunity to present the nursery industry's views regarding USDA's agricultural research programs and the Department's annual proposed budget. Thank you for your consideration, and we look forward to continuing to work with you, Committee members and your staff.

PREPARED STATEMENT OF THE AMERICAN ASSOCIATION OF RETIRED PERSONS

The American Association of Retired Persons appreciates this opportunity to comment on appropriations next year for various programs which benefit the low income elderly in rural America. Initiatives such as Section 515 Rural Housing Loans and Section 504 Very Low Income Home Repair Grants and Loans make a real difference in the quality of life for many elderly Americans.

AARP's recommendations may be summarized as follows:

- Include the Administration's recommended increase for Section 504 Very Low Income Home Repair Grants and Loans;
- Provide at least the current appropriation for Section 515 Rural Housing Loans—or supplement funding, if possible—with special emphasis on congregate facilities for the frail elderly; and
- Provide sufficient resources for Food Stamp outreach activities.

POVERTY AMONG RURAL OLDER PEOPLE

Some of the nation's most persistent economic, housing, and health problems are concentrated in rural areas among older people. In 1993, older people living in non-metropolitan areas had a poverty rate of 16.1 percent, compared with 8.7 percent for those living in the suburbs and 15.5 percent for those living in central cities. Poverty increases with age, reaching rates of 19 percent for rural elderly ages 75 to 79, 24 percent for those ages 80 to 84, and over 27 percent for rural older persons 85 and above, according to the 1990 Census.

Economic problems are particularly severe among older minorities and among rural women living alone. When these factors are combined, poverty is nearly universal. According to the 1993 American Housing Survey, 36 percent of all nonmetropolitan households consisted of older women living alone. Especially hard hit are older minorities living in areas where poverty is highly concentrated. Among rural African Americans age 65 and older, the poverty rate in 1993 was approximately 40 percent. In the southern U.S., where the nine states with the highest rates of poverty are located, the 1990 Census reports that poverty rates for the elderly ranged from 23 to 34 percent.

Poor older persons are also more likely than higher income elderly to have difficulty caring for themselves because of physical disabilities. According to the 1990 Census, 31 percent of rural elderly with incomes below the poverty level had mobility or self-care limitations. Such restrictions in activity have a direct impact on the ability to maintain and repair a home.

In addition to problems associated with low incomes, older persons in rural areas have much less access to needed services. The lack of support has driven many older people to give up their homes and relocate to areas and facilities where services are available or to be placed in nursing homes as a last resort.

The Association urges special attention to the plight of older migrant and seasonal farmworkers. Working and living conditions, which are generally bad for farmworkers of all ages, are abysmal for older farmworkers. Earnings for farmworkers over age 65 who are engaged only in farmwork continue to be far below the poverty threshold, and many receive no Social Security or other benefits. Not surprisingly, farmworkers often experience problems characteristic of the elderly before reaching their fiftieth birthday. Disability levels are high—44.5 percent of farmworker families include a disabled member according to one federal study. Unfortunately, access to needed services has often been blocked by prejudice, language barriers, and a lack of outreach activities.

RURAL HOUSING

One result of high rates of rural impoverishment is a striking concentration of housing problems among rural older people. Data from the 1993 American Housing Survey indicate that 34 percent of older people living in moderately or severely inadequate housing reside in rural areas, though only 28 percent of all older households live in rural areas. To address the needs of these older households and other

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vulnerable populations, it is critical that federal housing programs targeted to rural America be continued and strengthened.

For Section 515 Rural Housing Loans, AARP recommends that no less than the current \$153 million be made available next year. To the extent additional resources become available, we strongly urge an appropriation of \$220 million. This level of funding will help restore some of the cutbacks made in the program—down from \$512 million in fiscal year 1994 to the existing \$153 million. Legislative reforms in Section 515 have been enacted to address congressional concerns. Loan demand for both new construction and rehabilitation far exceeds existing resources. Section 515 is the only federal program to target funds directly to rural areas for rental housing production. We recommend that greater priority be given to serving previously underserved areas and populations such as older farmworkers. Elderly rural renters are cost-burdened to a greater extent than their younger counterparts. The 1990 Census indicates that more than half of elderly rural renters spent more than 30 percent of their income on housing compared to a third of younger rural renters. Section 515 Rural Housing Loans are critical to providing affordable rental housing opportunities in rural areas to very low-income households. Half of these loans have historically gone to provide housing for the elderly poor and disabled tenants of all ages. Given the extreme poverty which exists in many rural areas, the availability of such housing is vital for many families.

The Association further recommends that the Rural Housing Service place more emphasis on the development of congregate facilities and on the retrofitting of existing projects. Because of the scarcity of social services in many rural communities, congregate housing programs that provide nonmedical assistance such as meals, housekeeping, and transportation can be especially crucial to the independence of frail older residents. Unfortunately, a study conducted in 1991 by the Farmers Home Administration identified the lack of services and management personnel as obstacles to expanding the congregate housing program. We urge that the Secretary be encouraged to utilize existing programs within the Department to provide non-medical support services in congregate projects both for residents and older persons in the surrounding community.

AARP further urges greater attention to programs providing affordable housing to remote rural areas and areas with large concentrations of underserved populations such as older and disabled farmworkers. We support the set-aside of funds for underserved rural areas as included in the National Affordable Housing Act. In addition, the Association supports funding for the program for migrant workers and rural homeless people. Migrant workers tend to be older than other farmworkers and are more likely to be minorities with extremely low incomes. Farmworker housing very often has no heat or running water, creating barely tolerable living conditions for most families and a health-threatening situation for older persons.

The Association would like to take this opportunity to express its appreciation for the Subcommittee's continued support of the Section 504 Very Low Income Home Repair Program. Funds are used to remove safety and health hazards for the elderly poor or to install basic necessities such as indoor plumbing. We strongly urge the Subcommittee to provide the \$25 million proposed next year for Section 504 grants and the \$30 million recommended for the loan component. Funds provided in this program can really make a difference for the poorest of elderly Americans.

FOOD STAMP OUTREACH ACTIVITIES

Many older people in rural areas also suffer from nutrition-related health problems because they are economically unable to maintain a good diet. All too often, these individuals are forced to limit food purchases in order to manage the increasing costs of other necessities such as medical care, housing, and energy.

Food Stamp benefits can be a lifeline for such families but participation rates remain low due to a lack of information about the program or distance from Food Stamp offices. The social and physical isolation of rural older people makes outreach activities difficult but all the more critical. We urge the Subcommittee to provide sufficient resources for outreach activities next year.

Thank you again for the opportunity to present our views on rural housing and food stamps. We look forward to working with the Subcommittee to improve the lives of rural Americans of all ages.

PREPARED STATEMENT OF THE AMERICAN FARM BUREAU FEDERATION

Passage of the 1996 farm bill marked a new era for U.S. agriculture. Farmers and ranchers have received benefits from the new program, but many challenges remain and must be dealt with in order for agriculture to be profitable in the coming years.

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If agriculture is to fully utilize the new policy environment to increase farm income, we must continue to develop new markets for agricultural products at home and abroad, expand research efforts to improve our competitive advantage in food and fiber production, improve methods to ensure food safety and develop new efforts to protect the environment. The programs funded by this subcommittee are vitally important to achieving these objectives.

We are aware of the need for the subcommittee to make difficult funding choices consistent with efforts to balance the budget. We offer these suggestions to help the subcommittee make those difficult choices.

FARM BILL IMPLEMENTATION

Full implementation of the FAIR Act should not be compromised. As you know, the FAIR Act set agriculture on a seven-year course that eliminates price supports by establishing a hard cap on total spending regardless of prices or the volume of production. Agriculture's support for the FAIR Act was based upon the promise and assurance given that it was a seven-year contract between the federal government and agricultural producers. Accordingly, any change in current policies and programs would represent a violation of that agreement.

RISK MANAGEMENT

Farm Bureau places a high priority on the development of risk management tools to supplement or provide an alternative to traditional crop insurance

The expansion of risk management programs is of importance to farmers and ranchers. Farm and ranch income is increasingly at risk due to the phase-out of traditional price and income support programs. New and innovative tools to manage risk are needed by farmers everywhere.

We support the continued expansion of new risk management tools that may be offered by private companies and reinsured by the federal government. To the extent that the pilot Crop Revenue Coverage (CRC) program is actuarially sound, it should be expanded to cover as many parts of the country and as many crops as is feasible.

Farm Bureau is concerned about the budget shortfall which could leave thousands of producers without crop insurance. There are currently more than 1.6 million crop insurance policies which provide more than \$26.5 billion in liability protection to rural America. If Congress does not provide funding for delivery expenses for fiscal year 1998, the 1.6 million policies will be canceled.

CONSERVATION PROGRAMS

Farm Bureau places a high priority on funding for voluntary incentive-based conservation programs

Conservation funding is an integral component of the nation's overriding food and natural resource policy. Farmers and ranchers respond to positive incentives that enable them to: improve soil, water and air quality; reduce erosion; provide additional wildlife habitat; and increase green space. Because conservation projects can be very costly to implement, priority should be given to initiatives that provide education, technical assistance, training and financial assistance to accomplish the nation's farm and resource policy objectives.

Conservation incentives like Environmental Quality Incentive Program (EQIP), enable farmers and ranchers to incorporate conservation practices on their farms and increase efficiency, in addition to conserving and improving natural resources. EQIP provides the incentives necessary to achieve a broad range of conservation policy objectives. We support funding for EQIP at \$200 million.

In addition to EQIP, programs like the Grazing Lands Conservation Initiative and the Forestry Incentive Program (FIP) allow farmers and ranchers to accomplish further conservation and environmental gains without compromising net farm income. FIP does so by encouraging the planting and management of trees on nonindustrial private forest lands. We support the continued funding for FIP at \$6 million. The Grazing Lands Conservation Initiative does so through technical assistance and should be fully funded at the authorized level of \$60 million.

The small watershed and flood prevention program should continue to be funded at last year's level of \$90 million. This program is currently funding more than 500 small watershed programs, successfully addressing local water quality issues. The goals of this highly popular program are consistent with the new emphasis Congress placed on addressing agricultural water quality at the local level during the farm bill debate and reauthorization of the Safe Drinking Water Act. We oppose the redi-

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rection of National Resource Conservation Service (NRCS) small watershed program funds to other NRCS program areas.

We oppose funding for the Conservation Foundation. According to the 1997 report of this subcommittee, there are already 560 conservation foundations, including the federal government's Fish and Wildlife Foundation. This new foundation would be a private entity with no public or federal accountability even though it would receive federal funds.

We oppose the Administration's efforts to shift \$65 million of funding from the Conservation Reserve Program (CRP) to fund the Crown Butte Mines agreement. Money allocated for CRP should remain in that program to meet the objectives as outlined by Congress.

FOOD SAFETY AND INSPECTION

Farm Bureau supports the modernization of food safety and inspection programs

No group is more concerned about food safety than farmers and ranchers. USDA programs that keep food safe as it moves from farm to market and those that monitor the safety of consumer ready products are very important.

Farm Bureau supports adequate funding to implement Hazard Analysis Critical Control Point (HACCP) meat and poultry inspection reforms. Funding should be provided to train inspectors, pilot-test HACCP based inspection systems and to provide small plant HACCP demonstration projects. We are concerned about the impact on smaller processors and ask that an unreasonable burden not be placed on these plants.

Meat and poultry inspection is a public health function mandated by public law which should be paid from the general fund. We oppose user fees to finance federally mandated meat and poultry inspection. Agency reports on the impact of user fees fail to consider that, in general, user fees are not passed on to the consumer but rather are passed downward to producers in the form of lower prices paid for livestock.

Farm Bureau supports USDA funding for the Pesticide Data Program (PDP). PDP provides valuable pesticide residue information to the Environmental Protection Agency so that chemical registration decisions can be made on actual pesticide residues rather than on presumed maximum possible residue levels. This program should remain within USDA because it has the scientific expertise and working agreements with state agencies to effectively administer this program.

Also important is funding for USDA to update its database on human food consumption patterns. The Food Quality Protection Act requires EPA to evaluate the total risk associated with pesticide use. To do this, accurate information on human diets is needed but USDA's last human consumption survey was conducted 20 years ago. Updating this information should be a priority.

AGRICULTURAL RESEARCH

Farm Bureau places a high priority on funding for research which is focused on food and production agriculture

Agricultural research, education and extension activities should be focused on improving the performance of the food and agriculture sector. The benefits of this research will accrue not just to agricultural producers, but also to the general public. The food and fiber needs of a growing world population can be met only if there is a sharp focus on securing answers to questions challenging production agriculture.

Research funding should contain an appropriate mix of formula, competitive and special grants to assure an adequate, long-term commitment to top quality investigators. Each funding source plays a special role in our research system. We urge that growth in federal agricultural research funding be directed toward competitive grants to foster excellence and innovation.

Support for the National Research Initiative (NRI) needs to be provided at the original commitment of \$500 million needs to be considered. The NRI provides funding for basic research and long-term efforts that are primarily high-risk but which have high potential payoffs. These are usually the types of effort that private funding is reluctant to undertake due to the uncertainty of the return on investment, but which are vital to future discoveries.

It is appropriate, and in fact important, to review how federal dollars are being spent at the regional and state levels. We believe federal money spent on research or extension should be utilized to address priority national topics which have multi-state or national relevance, or will not be readily pursued by other entities. Institutional programs that are more locally focused should be covered by state funds.

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Special grants for national centers of excellence within the land grant university system should be awarded competitively and recognize unique abilities, institutional strengths and specialized regional needs. These grants should encourage alliances among land grant universities, state governments, USDA and private industry. Consideration should be given to incentives for proposals from national centers of excellence rather than proposals from individual institutions.

Farm Bureau strongly supports full funding of the Global Food Security and U.S. Agricultural Competitiveness Agri-Genome Project being developed to systematically map the genes of the most important U.S. crop and livestock's species. We believe this is an example of a project which would be well served by a special grant for a national center of excellence.

Farm Bureau supports the national effort of IR-4 to clear the registration of safe chemicals and biological pest control agents for use on minor crops. Tolerance reassessment, new deadlines and other provisions of the 1996 Food Quality Protection Act create a need for IR-4 to focus on developing additional tolerance information to support existing minor use registrations and new registrations where new products are needed.

We believe adequate research should be completed to determine air quality and odor parameters that provide scientifically proven levels which promote livestock health and worker safety. Research on manure management is a high priority, including such topics as odor reduction, waste and nutrient management and artificial wetland remediation of nutrients.

The Fund for Rural America should have a greater focus on research to assist farmers and ranchers. An example is research activities to develop marketing methods which allow producers to counter increasing concentration within the livestock and poultry industries.

We support continued research to verify the means of transmission of bovine spongiform encephalopathy (BSE) and methods to inactivate the causative agent. We support funding for research to reduce the risk to livestock and crop production from infection from exotic, foreign and new domestic diseases such as Karnal bunt.

We support funding for research to find an effective control of fire ants.

INTERNATIONAL MARKET DEVELOPMENT

Farm Bureau supports programs to maintain and expand foreign markets for agricultural products

Farm Bureau places a high priority on export promotion programs. Foreign sales continue to provide a market for 30 percent of U.S. agricultural production. Passage of the 1996 farm bill has increased the significance of overseas markets to farm and ranch profitability as farmers and ranchers become more dependent on exports to expand their incomes.

Maximum funding for the Market Access Program (MAP), the Foreign Market Development Program, the Export Enhancement Program (EEP) and Dairy Export Incentive Program (DEIP) are critical to maintaining and expanding foreign export markets. Funding provided for EEP and DEIP should be \$500 million and \$89 million, the maximum allowed. Stable funding for MAP, at \$90 million, will allow that program to continue to expand markets.

The Overseas Private Investment Corporation (OPIC) should be funded at no less than 1997 levels to guarantee access and investment in developing counties and territories. Because OPIC targets emerging markets for American products, the program provides access to markets with the greatest potential for growth.

We support the flexibility to maximize the use of available resources by allowing funds not utilized for direct export subsidies to be made available for other GATT-allowed or "Green Box" programs (including market development, research and promotion). Funding should be maintained for Commodity Credit Corporation (CCC) export credits and Public Law 480.

ANIMAL AND PLANT HEALTH

Farm Bureau places a priority on programs that protect plant and animal health

The Animal and Plant Health Inspection Service (APHIS) must be adequately funded to meet the high demands of protecting the nation's agriculture industry and its role in maintaining consumer confidence in the safety of the U.S. food supply. APHIS must have state-of-the-art diagnostic and processing procedures to ensure plant and animal health and to guarantee the safety of agricultural imports and exports.

Farm Bureau supports APHIS' request for \$7 million to provide leadership, management and coordination of international activities relating to sanitary and phytosanitary measures. This is important to the long-term leadership of American

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agriculture in international trade. The dispute with the European Union over beef hormone use, the poultry dispute with China, and the controversy surrounding the export of genetically-modified organisms provide examples where sound science is critical to lowering barriers for expanded trade.

APHIS is developing "regionalization" rules to govern the importation of animals and animal products. Regionalization will change the current system which prevents imports of any animal or animal products from a country with even a small incidence of diseases to a system that relies on risk-based assessments. Regionalization rules will need to be developed in the near future for all commodities in order for the United States to comply with international trading agreements. While cost effective in the long term, sufficient funds must be provided to adequately evaluate the monitoring, surveillance and control programs of our trading partners.

In conjunction with the development of the "Regionalization," APHIS is working with industry to establish an emergency preparedness plan to deal with new and emerging diseases. This is a critical complement of regionalization because it provides the internal infrastructure to allow the United States to deal rapidly with situations that may endanger domestic plants or animals or which may threaten our ability to export agricultural products. Funding for this project should not be short-changed.

Farm Bureau supports funding to complete brucellosis, tuberculosis, and pseudorabies disease eradication efforts. After decades of work, the program is on schedule to complete eradication of brucellosis from cattle herds by 1998. Any reduction in funding will negatively impact eradication efforts and could waste millions of dollars that already have been spent in this effort. As we move toward eradication of these diseases, core funding for animal disease control and eradication programs should be maintained to prevent new outbreaks and to respond swiftly to any that occur.

We support the allocation of additional funds for increased Bovine Spongiform Encephalopathy (BSE) surveillance of domestic cattle and for compensation to livestock owners whose animals must be destroyed. We support the implementation and funding of the Sheep and Goat Scrapie Voluntary Flock Certification Program and efforts to develop a swift and accurate live animal diagnostic test for scrapie. We support full funding of the National Sheep Industry Improvement Center.

We urge that funding for grasshopper control programs be made available when the need arises and support funding for the grasshopper integrated pest management program. Regulatory and pest control programs should be organized in each of the infested states, including all land in the affected area. We oppose reduction of funding for boll weevil eradication from the current level of \$16 million to \$6 million. With the great strides made to date, this is not the time to reduce the effort.

Farm Bureau opposes reductions in the Animal Damage Control and supports continued funding at \$26.6 million. We also oppose USDA's proposal that "APHIS should fund no more than 50 percent of total program operations in any state." Additional funding is needed to deal with damage caused by wolves due to the growth in the present population and reintroduction programs. Additional research is needed to develop effective biological alternatives for animal damage control.

USDA ADMINISTRATION

Farm Bureau urges Congress to act cautiously in considering another round of massive Farm Service Agency (FSA) service center closures. These offices are the conduits between farmers and ranchers and the programs created to help them. While acknowledging that additional efficiencies are possible, we believe any decision to close FSA offices should be based on several factors including workloads and geography and with local input. The implementation of the FAIR Act, EQIP, the Conservation Reserve Program (CRP) and other conservation programs and loan programs will ensure a significant work load for FSA in future years.

Farm Bureau is very concerned about proposals that would levy a one cent-per-pound tax on Florida sugar production to fund Everglades protection. It is very troubling that this idea has resurfaced after being soundly rejected by Florida voters in a 1996 ballot referendum. We believe that Florida voters are in the best position to judge the merits of this proposal and they recognized that Florida farmers are already aggressively addressing environmental concerns in the Everglades.

We support funding for Packers and Stockyards Administration programs. Expenditures to enable electronic submission of industry data, increase poultry compliance activities, to monitor and analyzing packer market competition and implications of structural change and behavioral practices in the meat packing industry are important.

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The Census of Agriculture has been an effective policy tool for monitoring the current status and documenting changes in the agricultural industry and for allocating federal funds. We support the funding the Census of Agriculture at \$36 million so that it can be completed in a timely manner.

We support the Commission on 21st Century Production Agriculture and urge sufficient funding to ensure that the commission will be able to conduct a thorough evaluation of the effectiveness of the FAIR Act and potential agricultural policy alternatives.

We support accurate, timely reporting of weather information and the maintenance and adequate funding of current weather analysis and information dissemination systems. We encourage federal, state and private agencies to work to improve these systems and the coordination of user support and federal funds to ensure continuity and improvement.

We oppose the diversion of any commodity program payment funds or conservation appropriations for the administration of USDA programs or to fund USDA employee buy-outs or restructuring.

PREPARED STATEMENT OF RALPH GROSSI, PRESIDENT, AMERICAN FARMLAND TRUST

American Farmland Trust appreciates this opportunity to provide you with our views on fiscal year 1998 appropriations for agriculture. The American Farmland Trust is a 30,000 member, private, non-profit organization founded in 1980 to protect our nation's farmland. AFT works to stop the loss of productive farmland and to promote farming practices that lead to a healthy environment. We respectfully request that these comments be entered into the record.

The complement of natural resource and research programs funded by your Subcommittee represents the most significant national investment towards natural resource conservation on private lands. Made up of research, cost-share, incentive, technical and financial assistance, annual rental payment, and longer term easement programs, these programs under USDA have the potential to work together to address the long term sustainability of our natural resource base and the availability of this base for agricultural production.

Protecting our nation's farmland through the Farmland Protection Program; ensuring a vital natural resource base through the voluntary conservation programs such as WRP, CRP, WHIP and EQIP; and identifying ways to produce safer, healthier food through the Integrated Pest Management and Sustainable Agriculture Research and Education programs must go hand in hand. Only by providing landowners with the tools to protect productive, private agricultural land can USDA ensure that this land will also be available to provide the multiple benefits of safer food production, rural character, wildlife habitat, and wetlands preservation to society as a whole.

I. NATURAL RESOURCES CONSERVATION SERVICE

Farmland Protection Program: American Farmland Trust strongly supports the Farmland Protection Program in the 1996 FAIR Act and urges Congress to make the remaining \$18 million available for fiscal year 1998.

Every year, hundreds of thousands of acres of our nation's most productive farmland are lost due to urbanization. When urban pressure pushes the value of agricultural land up, the next generation simply cannot afford to farm land valued at development prices.

The Farmland Protection Program encourages states and local communities to expand their own farmland protection efforts by providing federal matching funds. In addition to preserving the food production capability and the character of rural areas, funds from the FPP help communities retain the important natural resource conservation benefits provided by farmland. Well managed, farmland can provide open space, forest lands and wetlands for wildlife; protect the local tax base; and provide a sustainable and safe food source.

This program was authorized to draw \$35 million in CCC funds. When funded in fiscal year 1996 at \$15 million, this program protected 77,000 acres on more than 200 farms. It created no new bureaucracy, required no additional FTE's, yet leveraged funds available through 37 state and local farmland protection programs in 17 states.¹ Unfortunately, in fiscal year 1997 this program was capped at \$2 million, which is not enough for a functioning program. We strongly urge that you not cap

¹California, Connecticut, Colorado, Delaware, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Rhode Island, Vermont, Washington, and Virginia.

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this program. Let it continue to work, encouraging action at the state and local level to protect farmland across the country.

Conservation Technical Assistance (CTA): Conservation Technical Assistance is provided by NRCS to conservation district cooperators and other land users in the planning and application of conservation treatments to control erosion; improve water quality; enhance fish and wildlife habitat; improve pasture and range conditions; and protect and enhance wetlands. The 1996 FAIR Act provided funding for CRP, WRP, EQIP, WHIP and CFO through the Commodity Credit Corporation. However, the 1996 FAIR Act also amended the CCC charter by limiting the reimbursement for salaries to the 1995 spending level. In addition, technical assistance funding for EQIP is limited to 10 percent of the total instead of the approximately 19 percent or more needed by NRCS to effectively carry out the program. While this would leave 90 percent of the EQIP funds for implementing on-the-ground management practices, NRCS will have to supplement funding for EQIP technical assistance from the Conservation Operations account.

The shortfall in technical assistance resulting from the CCC cap and the OMB restriction will have a devastating impact on NRCS's ability to carry out these functions. To remedy this problem, AFT recommends that Congress increase funding by \$18 million for technical assistance at the field level through NRCS's Conservation Operations account to meet the needs of both the new and ongoing USDA conservation programs.

Wildlife Habitat Incentives Program: American Farmland Trust is pleased to see the renewed commitment by Congress and the Administration to encourage natural resource conservation on private lands. The new WHIP program is a positive step towards helping landowners continue to sustain healthy wildlife populations on private agricultural land. We support the Administration's request for \$30 million (\$22.5 million in financial and \$7.5 million in technical assistance) for the second year of the WHIP program.

Conservation Farm Option: The Conservation Farm Option provides a voluntary approach to implementing full-farm conservation plans to include the use of multiple conservation practices. Six regional pilot programs, authorized by section 335 of the 1996 FAIR Act, will be conducted for the purpose of soil and water conservation; water quality protection or improvement; wetland restoration, protection and creation; wildlife habitat development or protection, or other similar conservation purposes. CFO provides an opportunity to achieve multiple, targeted conservation benefits on farmland. This type of integrated approach is crucial to protect the integrity of the natural resource base upon which farming depends, and to protect farmland for the multiple environmental benefits it provides: scenic views, open space, food production, wildlife habitat. Thus we support the Administration's fiscal year 1998 request for \$11.250 million for financial assistance and \$3.75 million in technical assistance for the Conservation Farm Option and urge Congress not to cap these funds as was done in fiscal year 1997.

Wetlands Reserve Program: The Wetlands Reserve Program, authorized by the 1990 FACT Act, is an example of the kind of incentive driven approach to wetlands protection and restoration that should be a centerpiece of national agricultural policy. Thus we support the Administration's \$163.597 million dollar request, including \$18.200 million for technical assistance.

II. FARM SERVICE AGENCY

Conservation Reserve Program: American Farmland Trust has been a long-standing supporter of the Conservation Reserve Program. In its 1984 report, "Soil Conservation in America: What Do We Have to Lose?" AFT documented soil erosion as one of the country's most serious environmental problems, and recommended that a conservation reserve program be created to convert highly erodible lands to conserving uses such as pasture, hay, range, forest, or wildlife habitat. Today, the 36.4 million acre program which is projected to spend \$20 billion dollars over the next decade, is the most important conservation initiative in the country.

As the only national land conservation organization dedicated to protecting farmland and promoting farming practices that lead to a healthy environment, American Farmland Trust recognizes the Conservation Reserve Program is an effective, voluntary approach to improving the nation's natural resource base. American Farmland Trust urges the Congress to make funds available to achieve the full 36.4 million acre CRP. This will allow USDA to use the Conservation Reserve Program creatively, along with local, state and federal farmland protection efforts, to protect the resources and the land for this and future generations.

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III. COOPERATIVE STATE RESEARCH, EDUCATION AND EXTENSION SERVICE

Fund for Rural America: The Fund for Rural America was established by the 1996 FAIR Act to provide funds for rural development programs and a competitive grant program to support research, education and extension activities. We support the Administration's request for \$100 million, including, specifically: the Administration's request for \$33.3 million for Research, Education and Extension which will go, in part, to improve the stewardship of natural resources in agriculture and forestry; and the \$12.8 million of the Secretary's discretionary fund which will go, in part, to counter livestock waste problems.

Sustainable Agriculture, Research and Education: Sustainable Agriculture, Research and Education (SARE) is a grants program that funds high-quality, farmer involved research and education on economic, agronomic, and environmental aspects of sustainable agriculture farming systems. Authorized at \$40 million, it has been underfunded with a high of \$8.1 million. We request an increase in SARE funding of \$10.5 million to research and \$4.5 to extension for a total of \$15 million.

Bio-intensive Integrated Pest Management: Our ability to produce food and fiber in the United States in step with domestic and global demands depends upon access to safe, profitable and reliable pest management systems. New tools and better information are essential for farmers to (1) protect their crops; (2) lower production costs; and (3) reduce reliance on high risk pesticides. Confidence is growing in the profitability and effectiveness of biologically based integrated pest management (IPM) systems—or bio-intensive IPM for short. Such systems combine the pest control options available with an understanding of what is needed to address pest problems on each farm. We support the Administration's request for an increase in IPM funding in fiscal year 1998.

Thank you for this opportunity to comment. I look forward to working with this Committee to ensure the vitality and sustainability of our nation's farmland and natural resources.

PREPARED STATEMENT OF JERRY STROOPE, AMERICAN HONEY PRODUCERS ASSOCIATION

My name is Jerry Stroope. I am a third generation commercial beekeeper. I have come here to testify in behalf of the American Honey Producers Association, a national organization of beekeepers. I have brought with me today: Mr. Mark Brady, President of the Texas Beekeepers Associations Mr. James Ross, Past President of the Oklahoma Beekeepers Associations and Mr. Glenn Gibson, President of the Oklahoma Beekeepers Association. I have brought these industry representatives along today to answer any questions that this committee may wish to ask.

Honey bees pollinate over 90 cultivated crops whose estimated value exceeds \$9.3 billion and produce an average of 227 million pounds of honey annually. These figures represent one third of food supply which is dependent on honey bee pollination. Since 1984, the survival of the honey bee has been threatened principally by a number of problems for which beekeepers are depending upon research for the answers.

In 1984, a parasitic mite, the tracheal mite, was first found in honeybees in this country. In 1987, a second parasitic mite, the varroa mite, also found its way into our bee population. These two parasitic mites have spread throughout the country and have had a devastating effect on beekeeping in the United States. Colonies that have been able to survive, have been weakened to the point that they become poor honey producers and pollinators. Anytime the beekeeping industry experiences these type of losses those food crops that are dependent upon honey bee pollination experience decreased yields and poorer quality thus increasing the cost of our nations food supply.

Since our last testimony, our mite infestation has increased from 30 percent to nearly 100 percent. Untreated colonies have very little chance of survival and recorded losses of treated colonies continues to rise. The feral (wild) bee supply has been virtually wiped out. Home gardeners and wildlife are very dependent on feral colonies for their pollination services.

Parasitic mites continue to develop resistance to our treatments. The long range solution to our mite problem is the development of resistant bee stocks. This research is ongoing and will take years to complete.

The Africanized honey bee (AHB) continues to warrant strong attention and research. It appears that the AHB was strongly hit by the mites, just as our feral and domestic bee stock. However, the AHB appears to have rebounded much better than its cousins and is now on the rebound.

With beekeepers experiencing heavy losses of bees, many have given up. Those choosing to hang in there, continue to be hurt in other areas that need serious at-

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tention by researchers. The greater wax moth continues to destroy millions of dollars of bee equipment. Hives weakened by the mites are taken over by the wax moth and destroyed. There is no generally acceptable chemical available that the average commercial beekeeper can use to control the wax moth.

Beekeepers continue to experience heavy losses from pesticides that are used on crops. Expanded research is needed in this area to develop methods to control crop pests without killing the badly needed honey bees.

One of the most important methods of dealing with many of our bee problems involves requeening our colonies. Locating queens is very labor intensive and time consuming. Research is needed to develop practical methods for requeening. Success in this area could virtually change beekeeping as we know it. The entire beekeeping industry could in a short period of time improve its stock by requeening, thus allowing the beekeeper to deliver healthy strong hives to the crops dependent upon the services of the honey bee.

It is our understanding that the Department of Agriculture is seeking an appropriation for the fiscal year 1998 of \$4.7 million for honey bee research. We earnestly request that your committee support this level and an additional \$995,000 for funding that would support four new scientists to be stationed at the Weslaco Bee Lab. This would bring the total to seven scientists at Weslaco which is the number that the Weslaco unit was designed to accommodate. If the Weslaco unit is not adequately filled with bee research scientists, the lab may be lost. This loss would definitely hurt the beekeeping industry. Remember, that an investment in honey bee research is an investment in at least one third of our food supply.

We appreciate the past and present support of the Department of Agriculture. We hope this committee will feel free to call upon us with any questions that will help clarify our industry needs. I would like to thank this committee for this opportunity to testify and I or my associates here today would be happy to answer any questions.

PREPARED STATEMENT OF THE AMERICAN INDIAN HIGHER EDUCATION CONSORTIUM

I. INTRODUCTION

Mr. Chairman and Members of the Subcommittee, the American Indian Higher Education Consortium (AIHEC) and the 29 Tribal Colleges that comprise the AIHEC land-grant institutions, are honored to have this opportunity to share our funding requests for fiscal year 1998. We respectfully request full funding of our four land-grant programs. These include: \$4.6 million for the Tribal College endowment; \$1.45 million for the equity grant program; \$5 million for the joint 1862–1994 institution extension program; and \$1.7 million for institution capacity building grants.

This statement will cover four key points: first, we will provide a brief background on the Tribal Colleges and our long-awaited inclusion in this nation's land-grant system; second, we will discuss the agricultural potential of American Indian communities and the need to ensure that American Indians have the skills needed to maximize the economic development potential of our resources; third, we will discuss ways in which the Tribal Colleges are working with the U.S. Department of Agriculture and state land-grant institutions toward the goal of full integration into the land-grant system; and fourth, we will describe our program requests for fiscal year 1998.

II. BACKGROUND ON TRIBAL COLLEGES

Since American Indian reservations became the final lands under the American flag to receive land-grant status in 1994, we have heard very quiet, but persistent, rumblings that Tribal Colleges should not be part of the land-grant system because we are not "true" land-grant institutions. Mr. Chairman, nothing could be further from the truth. Today, 130 years after enactment of the first land-grant legislation, Tribal Colleges, more so than any other institutions, truly exemplify the original intent of the land-grant legislation. The first Morrill Act was enacted in 1862 specifically to bring education to the people and to serve their fundamental needs.

C. Peter Magrath, president of the National Association of State Universities and Land-grant Colleges, writing in the foreword to John Campbell's "Reclaiming a Lost Heritage," said the authors of the 1862 legislation realized that "education would be extraordinarily valuable to all of America if there were universities open to all—to the daughters and sons of farmers, mechanics, and other workers, not only to the rich, the well-born, the privileged." The universities were to "promote education that would be practically applied to meet the economic development needs of that area

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* * *. In effect, the universities were to be chartered by the people * * * to serve the people.”

Mr. Chairman, this is the definition and mission of the Tribal Colleges. We truly are institutions by, of, and for our people.

In the early 1970's, American Indians faced dismal statistics: out of one hundred students, 56 percent would become high school drop-outs; 44 percent would graduate high school; of those graduates, only 15 percent would go on to college; of those, 70 percent would drop out; of those remaining who would go on to graduate school, 90 percent would drop out.

If you do the math, you will realize that of those 100 students, only two were likely to graduate from college, and the two who graduated had less than a 10 percent chance of getting an advanced degree. The impact statistics like these have on the economies of Indian Country is well-documented: unemployment on the reservations hovers around 48 percent and soars to 80 percent or higher in the Northern Plains.

These astounding statistics brought tribal leaders to the realization that only through local culturally-based education could many American Indians succeed in higher education and help bring desperately needed economic development to the reservations.

In the late 1960's and early 1970's, the first Tribal Colleges were chartered on remote reservations by their respective tribal governments, to be governed by boards of local tribal people. In 1972, the first six tribally-controlled institutions came together to form the American Indian Higher Education Consortium. Today, AIHEC is a cooperatively sponsored effort on the part of 31 member institutions in the United States and Canada, 29 of which are the 1994 land-grant institutions.

Tribal Colleges now serve 25,000 students each year, offering primarily two-year degrees, with a few colleges offering four-year and graduate degrees. In addition, Tribal Colleges offer a wide range of community services. Since their inception, the Tribal Colleges have helped address the problems and challenges of our welfare system. Tribal Colleges provide GED and other college preparatory courses, probably more than any other community colleges in this country. We have done this because our mission requires us to help move American Indian people toward self-sufficiency and help make American Indians productive, tax-paying members of American society. Fulfilling this obligation will become increasingly more difficult over the next several years for two reasons: (1) federal funding resources are becoming smaller; and (2) as a result of welfare reform legislation, more and more welfare recipients are turning to the Tribal Colleges for training and employment opportunities. Already, the Tribal Colleges serve as community centers, providing libraries, tribal archives, career centers, economic development centers, public meeting places, and child care centers.

Despite our many obligations, functions, and notable achievements, Tribal Colleges are the most poorly funded institutions of higher education in this country. Historically, states do not have an obligation to American Indian lands because our reservations are trust lands under federal jurisdiction. Unlike mainstream land-grant institutions that can depend on state and local governments to match or surpass their federal investment, we cannot. Our core funding under the Tribally-Controlled Community Colleges Assistance Act of 1978 remains grossly inadequate; and total funding for the agriculture programs authorized for all 29 of the 1994 institutions combined equals approximately the amount the Department of Agriculture gives to just one state land-grant institution each year.

III. UNTAPPED ECONOMIC DEVELOPMENT POTENTIAL

Although current land-grant programs at the Tribal Colleges are modest, our 1994 authorizing legislation is vitally important to us because of the nature of our land base. Of the 54.5 million of acres that comprise American Indian reservations, 75 percent are agricultural lands and 15 percent are forestry holdings. In fact, Indian agricultural production has been valued at nine times the production potential of oil and gas resources.

Tragically, due to lack of expertise, equipment, and training, millions of acres are under-used or are developed through methods that render the resources non-renewal. The Department of Agriculture's National Indian Working Group (NIWG) reported nearly ten years ago that, "Indian use of Indian lands has dropped off significantly in recent years, and idle Indian lands have increased at a rate as high as 40 percent in one year." (1987 Final Findings and Recommendations of NIWG)

The Educational Equity in Land-grant Status Act of 1994 is our hope for turning these statistics around. It is absolutely critical that American Indians learn more about new and evoking technologies for managing our lands. We are committed to

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becoming, as we were when your forefathers came to this land centuries ago, productive contributors to this nation's—and the world's—agricultural base.

IV. PARTNERSHIPS WITH DEPARTMENT OF AGRICULTURE AND OTHER LAND-GRANT INSTITUTIONS

The 1994 institutions are ready to address the challenges of Indian Country, but we need this Subcommittee's support. Already, a firm and growing commitment exists on the part of the U.S. Department of Agriculture and the mainstream land-grant community to work cooperatively with the 1994 institutions to address the challenges of American Indian agricultural and higher education systems.

As you know, this has not always been the case. In fact, the Department of Agriculture admits that over the past several decades, its programs did not address the special status of Indian tribes as sovereign nations and did not accommodate the special needs of tribal ownership of land in trust. However, as a result of the 1994 legislation, a firm commitment to the Tribal Colleges from the administration, as exemplified in the Executive Order on Tribal Colleges signed last fall and a series of "listening sessions" held recently by a USDA's Civil Rights Action Team, we believe the Department has evolved into a much stronger supporter of the Tribal Colleges.

Over the past three years, departmental officials have made a sincere effort to include the Tribal Colleges in long-established programs. To build on this relationship, the February 1997 report on "Civil Rights at the Department of Agriculture" recommends that the USDA "thoroughly examine funding for the 1994 institutions and adjust its budget recommendations and consider other statutory or regulatory changes required to eliminate any disparate funding of land-grant institutions." We win be working closely with the Department to see that this critically-important recommendation and other tribal-specific suggestions are carried out.

Last December, AIHEC was pleased to co-host with USDA a joint conference and working session on departmental programs. This two-day meeting in Albuquerque, New Mexico, gave Tribal College presidents and USDA officials and staff a chance to become better acquainted. Tribal College Presidents and faculty were able to learn details about USDA's higher education programs and resources, and the USDA personnel who administer our programs were able to learn more about the unique character and needs of the Tribal Colleges. We believe ad who attended would agree that the meeting was a resounding success.

In addition to the Albuquerque meeting, we have met on several occasions with Deputy Secretary Rominger, most recently at AIHEC's annual Winter Conference in Washington D.C. last month. At the conference, the Deputy Secretary, along with Dr. K. Jane Coulter, Deputy Administrator for Science and Education Resource Development, discussed programs being implemented by the Department for the benefit of the Tribal Colleges. In particular, the Deputy Secretary provided us with an update on the status of the Memorandum of Agreement between the Department and the Tribal Colleges, which we hope to sign shortly. The MOA, which was mandated in the 1996 Farm Bill, will cover four key points: (1) student programs; (2) employment and program opportunities; (3) capacity building; and (4) full access to grant and excess property programs. We are heartened by the Department's apparent commitment to the Tribal Colleges, and we look forward to joining with the Department and other land-grant institutions, as Dr. Coulter urged, to "make a better world."

Prior to enactment of the 1994 legislation, the National Association of State Universities and Land-Grant Colleges (NASULGC) endorsed the concept of the Tribal Colleges receiving land-grant status. Today, we are members of the Association. We are pleased that earlier this year, NASULGC's Board of Agriculture's Academic Programs Section voted to include a Tribal College representative on the Academic Programs Committee on Policy. Partnerships like this will strengthen both American Indian higher education and the U.S. higher education system.

I would like to note that Tribal Colleges adhere to the same strict accreditation standards and accrediting boards as do mainstream institutions; and for a number of years, most 1994 institutions have had articulation agreements in place with 1862 institutions. The history of successful student transfers from Tribal College to mainstream four-year institutions is well documented.

Over the past few years, Tribal Colleges and 1862 institutions have successfully collaborated on several competitive grants through the Department of Agriculture, and as the new extension grant program begins later this Summer, partnerships will increase significantly. These collaborations form a comprehensive and well-planned system in which both the Tribal Colleges and the state institutions win.

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For example, Lac Courte Oreilles Ojibwa Community College in Wisconsin submitted a successful USDA Multi-cultural Scholars proposal with the University of Wisconsin-River Falls. This program allows American Indians in agriculture and natural resources fields to study for two academic years at the 1994 institution and then transfer to the state institution. This successful program is complimented by the Tribal College's collaboration on a distance-learning project which received funding under USDA's competitive Higher Education Challenge Grant program. American Indian students who will transfer from Hayward can take academic courses from the River Falls campus, acclimating them to River Falls' instructors and course work and ensuring a smooth transition later. These types of programs are enabling the land-grant community to dramatically improve their retention and completion rates with American Indian students.

V. FUNDING EQUITY FOR TRIBAL COLLEGE PROGRAMS

The twenty-nine 1994 Institutions' appropriations request for fiscal year 1998 are extremely modest when compared with the annual appropriations to each existing land-grant institution. The 1994 legislation authorized four vital programs: \$4.6 million for the Tribal College endowment; \$1.45 million for the equity grant program; \$5 million for the joint 1862-1994 institution extension program; and \$1.7 million for institution capacity building grants. It is important to remember, as we stated earlier, total funding for the programs authorized for all 29 of the 1994 institutions combined equals approximately the amount the Department of Agriculture gives to just one state land-grant institution each year.

The Tribal Colleges are grateful for the Subcommittee's support in the past for funding of three of our programs. These small programs catalyzed the 1994 institutions' crucial first steps in initiating and strengthening agriculture and natural resource programs in our communities. During this third year of our authorization, it is critical that we build on the momentum we have gained. AIHEC respectfully requests full funding for our four programs in fiscal year 1998:

1. *\$4.6 million Endowment Fund for 1994 Land-Grant Institutions.*—This endowment installment remains with the U.S. Treasury. Only interest is distributed to the 1994 institutions. Just as other land-grant institutions historically received large grants of land or endowments in lieu of land, this sum assists the 1994 institutions in establishing and strengthening our academic programs in the areas of curricula development, faculty preparation, instruction delivery systems, equipment and instrumentation for teaching, experiential learning, and student recruitment and retention in the food and agricultural sciences. As the endowment increases over time, it will provide each 1994 institution with significant income. The first year interest payment totaled nearly \$116,000, which was distributed to the 29 land-grant institutions on a formula basis.

2. *\$1.45 million Tribal College Educational Equity Grant Program.*—Closely linked with the endowment fund, this program provides \$50,000 per 1994 institution to assist in academic programs. The 1994 institutions are in their second year of funding under this program. Through the funding made available in fiscal year 1996, the Tribal Colleges were able to support vital courses and planning activities specifically targeted to meet the unique needs of our respective reservations. Examples of programs include:

- Navajo Community College, which has established an interdisciplinary "Center for Integrated Rural Development Studies." The new center will design and deliver classroom, research, and extension programs in three interrelated fields: community development, economic development, and natural resources management. These three fields are critical to the Navajo well-being.
- Fort Peck Community College in Montana, which is building a distance learning program, supplemented by on-site instruction, to provide agricultural and agribusiness courses through its interactive telecommunications system. Through the enhancement of its electronic technology capabilities and through articulation agreements with four year institutions, the college will provide the training needed to promote agriculture as a meaningful and productive way of using the reservation land base.
- Southwestern Indian Polytechnic Institute in Albuquerque, New Mexico, which is establishing a comprehensive Agricultural Science, Engineering, and Technology training infrastructure. This program builds on current resources, prepares students for immediate entry into the labor force, provides fundamental course work needed at four-year institutions, and opens the door for eventual success in a wide variety of professions.
- Other Tribal Colleges have started natural resource management courses; nutrition and dietetic programs; environmental sciences curricula; comprehensive

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horticulture programs; and courses on sustainable development, forestry, and buffalo production and management.

3. *\$5 million Extension Programs.*—Currently, extension services provided by the states on our reservations are woefully inadequate. We are anxious to begin our first year of funding under a new extension program specifically for the remote reservation communities served by Tribal Colleges. For fiscal year 1997, the Congress appropriated \$2 million to begin this competitive grant program, which will be administered and coordinated through the 1862 institutions. In fiscal year 1998, we are requesting a modest funding increase of \$3 million, to \$5 million, the fully authorized level for this program.

During the development of regulations for this new program, we are pleased to report that the Department of Agriculture actively sought guidance and recommendations from both Tribal Colleges and the 1862 institutions. Like so many others within the Department of Agriculture, the Deputy Administrator for Partnerships, Dr. George Cooper, and Joan Gill, program manager, have made the Tribal Colleges feel like true partners in the Department's efforts. We are grateful for their interest and support, and we are optimistic that the new partnerships we will forge with the Department and the 1862 institutions will be highly beneficial to our tribal communities.

As you know, Mr. Chairman, this is an extension program, and some questions have been raised that this program is duplicative of ongoing extension activities. This is not the case; rather, we believe this new program will complement current programs. The existing Reservation Extension Agent program is underfunded and needs other programs to build upon its modest efforts. Currently, the program provides personnel for some reservations, but it is not commensurate with the need. In 1996, only 32 Indian Reservation Extension Agents existed nationwide to meet the agricultural needs of 314 reservations and trust lands of 54.5 million acres.

Just as federal, state, and local resources combine to form an effective and non-duplicative extension program for mainstream America, the new Tribal College program and the Reservation Extension Agent program can comprise key parts of a comprehensive strategy for Native America. In addition, this extension program will give the 1862 institutions and extension agents access to the Tribal College infrastructure, which has had unmatched success in implementing programs in Indian Country.

These resources will be used for programs such as rural agriculture economic development, 4-H programs, entrepreneurial encouragement, small farm sustainability, agricultural business development, nutrition and food services for the elderly, and numerous other programs which have already served mainstream America so well through state extension services. This program represents an ideal combination of federal resources and Tribal College-state institution expertise, with the overall impact being far greater than the sum of the parts.

4. *\$1.7 million Institutional Capacity Building Grant Program.*—This competitive grant program, which requires non-federal match, would provide the 1994 institutions with the investment necessary to allow us to strengthen and more fully develop our educational infrastructure. Unlike state institutions that have existed for nearly a century and a half, the 1994 institutions have basic infrastructure needs. The Tribal Colleges must develop our classroom capacity, upgrade and purchase computers and equipment, and garner the resources necessary to provide American Indian students with the education necessary to fully compete in the modern agricultural world.

5. *NASULGC Requests.*—The 1994 Institutions support NASULGC's funding requests, particularly the requests for a modest increase in funding for the Higher Education Challenge Grants (to \$5.35 million); the Multi-cultural Scholars program (to \$2 million); and the Graduate Training Fellowships (to \$4 million). These competitive programs allow the Tribal Colleges to participate jointly with four-year agricultural colleges and help develop effective collaboration and innovation within the land-grant community.

VI. CONCLUSION

The 1994 institutions are efficient and effective tools for bringing education to American Indians. The modest federal investment in the Tribal Colleges has paid great dividends in terms of employment, education, and economic development, and continuation of this investment makes sound moral and fiscal sense. No communities are in greater need of land-grant programs than American Indian reservations, and no institutions better exemplify the original intent of land-grant institutions than the Tribal Colleges.

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Mr. Chairman, we appreciate the Subcommittee's long-standing support of the Tribal Colleges, and we are grateful for your commitment to our efforts to bring self-sufficiency to our communities. We look forward to continuing a partnership with you, the Members of your Subcommittee, the Department of Agriculture, and the mainstream land-grant system—a partnership that will bring equal educational agricultural, and economic opportunities to Native America. Thank you.

PREPARED STATEMENT OF THE AMERICAN PHYSIOLOGICAL SOCIETY

The American Physiological Society is pleased to provide its views concerning funding for enforcement of the Animal Welfare Act, which is a subject of profound concern to the biomedical research community.

The American Physiological Society (APS) is the nation's oldest learned society dedicated to medical research. Founded in 1887, the Society now has more than 8,000 members who teach medical students about the workings of the body's organs and systems and also conduct research at colleges, universities, medical schools, and pharmaceutical and biotechnology companies throughout the U.S.

The APS supports Animal Welfare Act enforcement within USDA's Animal and Plant Health Inspection Service (APHIS). Proper treatment of animals is important both for its own sake and to ensure that research results genuinely represent what is being studied. This can only be achieved with a healthy, unstressed animal.

The Animal Welfare Act governs the humane care and treatment of many of the species of animals used in biomedical research. APHIS enforces the law by licensing facilities that do animal research, carriers who transport animals, and dealers who buy and sell certain species of animals. It also conducts inspections to ensure compliance and collects annual statistics on how many animals of the regulated species are used in research each year.

The research community supports Animal Welfare Act enforcement. Given the current budget environment, we also believe that APHIS should have clear priorities to make the most of its funding. Enforcing regulations concerning USDA-licensed Class B dealers should be one of those priorities. Members of this Subcommittee are no doubt aware of allegations that large-scale pet theft is taking place in this country. There have been well-publicized claims that as many as one to two million stolen dogs and cats are sold each year to research laboratories. This has led to calls for eliminating Class B dealers (who sell non-purpose-bred dogs and cats for research) as a way to end pet theft. Last year a House Agriculture Subcommittee held hearings on pet theft allegations and USDA enforcement efforts.

Access to non-purpose-bred dogs and cats is important for medical research. Eliminating Class B dealers is an unnecessary step that would hamper medical progress. It is unnecessary because adequate enforcement of existing laws will provide people with assurance that their pets are safe. Eliminating Class B dealers would hamper medical progress because some research relies upon the kinds of animals Class B dealers supply. Relatively little research in this country involves dogs and cats. However, advanced investigations of certain aspects of heart disease, neurological disorders, bone and joint deterioration, or shock-trauma may require animals that are larger, older, or free from shared genetic defects, which can confound the results of the research. It is much easier to find animals with these traits among non-purpose-bred animals rather than purpose-bred ones. Not surprisingly, breeders tend to sell animals that are small, young, and genetically homogenous. Class B dealers currently supply about a third of all dogs and cats used in medical research, and in some places where animal activists have succeeded in closing pounds and shelters to research, there is no other source of non-purpose-bred animals.

The research community finds itself in an impossible position of proving a negative—that animals are not stolen pets. We don't want to use stolen pets in research. We want legally-acquired, non-purpose-bred animals that no one wants so we can study important health problems that affect humans and animals alike. These accusations of massive pet theft frighten the public, and while there is good reason to doubt those claims, there is also evidence that some aspects of APHIS enforcement have been inadequate. Therefore, we believe that the solution is good enforcement of the existing Animal Welfare Act regulations on Class B dealers.

The Animal Welfare Act has provisions to ensure that Class B dealers do not receive stolen pets. By law Class B dealers may only obtain dogs and cats from defined, legal sources, and they must keep identifying information on each animal and the person who supplied it. They must adhere to USDA standards for providing food, shelter, sanitation, and veterinary care. USDA makes unannounced inspections of dealers' facilities and has the authority to search for missing animals and to confiscate an animal whose life is in danger.

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The research community supports enforcement of these laws, including revoking the license of any dealer who acquires stolen animals or repeatedly refuses to comply with the other provisions of the law. APHIS clearly recognizes the importance of its enforcement role and has taken steps to ensure compliance by investigating complaints against B dealers. APHIS must continue to give these inspection efforts the high priority they deserve.

The Federation of American Societies for Experimental Biology (FASEB), of which APS is a member, also supports Animal Welfare Act Enforcement. FASEB, which is comprised of 12 Societies representing 43,000 research scientists, recently released its fiscal year 1998 funding and policy recommendations concerning federally funded biomedical research. In its report FASEB urged USDA "to enforce the AWA provisions with respect to random-source animal dealers in order to fulfill the intent of Congress and uphold the public's confidence about their pets' safety." A copy of this report language is attached.

Some aspects of the administration's budget proposal do raise concerns. The administration has requested \$9.175 million for Animal Welfare Act Enforcement. The program's funding has been hovering around \$9.2 million for 5 years, after declining from a high of \$9.7 million in the early 1990's. This has required APHIS to take difficult steps such as closing regional offices and not filling vacant animal welfare inspector positions. Even if the current budget squeeze precludes an increase, APHIS definitely needs the full \$9.175 in fiscal year 1998 to carry out its responsibilities.

While unclear, the administration's budget request seems to rely upon new user fees to supply \$3 million of the requested funds. These user fees, apparently to be levied against research facilities, dealers, and carriers, have not been formally proposed by the administration, much less approved by Congress. Nevertheless, the request seems to rely upon these fees to replace \$3 million in appropriated funds. The APS urges this committee to take a very close look at this matter. APHIS needs to be given both the necessary funding and a clear sense of priorities to continue its important work of enforcing the Animal Welfare Act.

Thank you for this opportunity to express the views of the American Physiological Society.

[ATTACHMENT]

FEDERAL FUNDING FOR BIOMEDICAL AND RELATED LIFE SCIENCES RESEARCH FISCAL YEAR 1998

* * * * *

ANIMAL WELFARE ACT ENFORCEMENT

USDA is also charged by Congress to enforce the Animal Welfare Act (AWA), which is vitally important to the conduct of biomedical research across the nation. Congress passed the AWA and its subsequent amendments to protect family pets without imposing unjustified restrictions on the use of dogs and cats for medical research. Under the AWA, USDA licenses dealers to buy and sell nonpurpose-bred or random-source animals to research facilities that are unable to obtain them from municipal pounds and shelters. Scientists need random-source dogs and cats, which are older, larger, and more diverse in genetic background than those available from animal breeders, for research on health problems, including cardiovascular disease and aging-related disorders such as bone and joint deterioration.

FASEB urges USDA to enforce the AWA provisions with respect to random-source animal dealers in order to fulfill the intent of Congress and uphold the public's confidence about their pets' safety.

* * * * *

PREPARED STATEMENT OF THE AMERICAN SEED TRADE ASSOCIATION (ASTA) CORN AND SORGHUM BASIC RESEARCH COMMITTEE

SUMMARY

We are requesting \$500,000 be added to the \$500,000 appropriated in 1996, for a total of \$1,000,000 to be appropriated annually for enhancing corn germplasm.

1. Corn is a key resource providing food, industrial uses, livestock feed, and export.

2. Corn production in the U.S. is based on less than 5 percent of corn germplasm available in the world. Broadening the germplasm base would provide genes to im-

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prove yields and protect against new disease, insect and environmental stresses. Exotic germplasm would also be a source for changes in grain quality being demanded by export markets, industrial processors, and other end users.

3. Most exotic germplasm is unadapted to growing conditions in the U.S. This proposal is a joint USDA/ARS, university, and industry effort to adapt this material, so that it can be used by commercial breeders in the development of new hybrids to meet the demands of the American consumer and our foreign markets.

4. We greatly appreciate the \$500,000 previously appropriated for this research, beginning in the 1995 federal budget. This funding is supporting the two main USDA/ARS locations involved in this research (Iowa and North Carolina), as well as USDA/ARS and university locations in Delaware, Georgia, Illinois, Iowa, Louisiana, Mississippi, Missouri, New York, Ohio, Pennsylvania, Tennessee, and Wisconsin. Industry is providing \$450,000 in-kind support annually for this effort.

5. The additional appropriation of \$500,000 annually would enable the Iowa and North Carolina locations to purchase equipment and add staff necessary for carrying out this research. It would also provide funding for the increased germplasm evaluation and breeding necessary to test and enhance the exotic materials available.

BACKGROUND

Corn is the major crop on the cultivated land of the USA where approximately 75 million acres are planted each year. U.S. corn production, accounting for about half of the world's annual production, adds over \$16 billion of value to the American economy as a raw material. About 20 percent (\$3.2 billion) of this production is exported each year, thereby providing a positive contribution to the nation's trade balance. Approximately 17 percent of the yearly corn crop is industrially refined. A portion of refined products is exported resulting in an additional \$1.4 billion in export. Through feeding livestock, the rest of the crop is processed into meat and dairy products that affect everyone in our society. Corn is a key resource within our country.

CONCERNS

All of this production is based on using less than 5 percent of the corn germplasm available in the world. Less than 1 percent of our commercial corn is of exotic (foreign) origin, and tropical exotic germplasm is only a fraction of that. This situation exists because private sector corn breeders have generally concentrated on genetically narrow based, or elite by elite, sources for their breeding efforts, since their use results in getting hybrids to the marketplace faster.

Traditionally, corn has been treated as a commodity. In recent years corn grain users and processors have become more interested in the quality characteristics of the grain itself and how this affects their business. Since much of the exotic germplasm has undergone selection for many indigenous uses (foods, beverages, etc.) by various cultures, it seems likely that new grain quality characteristics will be found in exotic rather than the narrow-based germplasm now used. A small increase in value to the grain, such as 10 cents per bushel, would increase its annual value by \$800 million for an eight billion bushel harvest.¹

Breeders must still be concerned with breeding for higher yields so that U.S. corn farmers can remain competitive. Tapping into the broader germplasm pool could provide new sources of genes for higher yield and other performance traits, such as disease and insect tolerance or improved stalk and root strength.

A further concern with a narrow genetic base is the potential for widespread disease or insect damage due to new diseases or insect species spreading into U.S. corn growing areas. It is more likely that resistance to these dangers would be found in genetically diverse exotic germplasm sources than in our breeding material. One major benefit would be reduced pesticide use. In addition to protection against diseases and insects, these exotic materials provide insurance for unforeseen climatic or environmental problems.

A great deal of excitement has been generated over the new techniques of biotechnology, especially over the potential value to the corn industry of gene transformation using genetic engineering. Research conducted on exotic germplasm could yield many beneficial genes that genetic engineers could quickly transfer to commercial hybrids.

¹Salhuana, Pollak, Tiffany 1994. Public/Private Collaboration Proposed to Strengthen Quality and Production of U.S. Corn through Maize Germplasm Enhancement, Diversity Vol. 9, no. 4, 1993/Vol. 10, no. 1, 1994.

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LAMP PROJECT

What would be the source of this exotic germplasm? Over the years, collections of corn have been made from farmers' fields and other sources all over the world, and are stored in various germplasm banks. In 1987, the Latin American Maize Project (LAMP) was initiated to evaluate these corn collections (accessions). It was a cooperative effort among 12 countries to identify accessions that might provide valuable source material for further improvement in hybrid and open-pollinated cultivars in the U.S.A. and other areas. Pioneer Hi-Bred International gave USDA/ARS \$1.5 million to fund the LAMP research.

Nearly 12,000 maize (corn) germplasm accessions were evaluated. In successive stages, the project identified the top 268 accessions. The environmental areas of adaptation for these 268 "elite" populations range from temperate to tropical, and are prime candidates for enhancing the U.S.A. corn germplasm base.

GERMPLASM ENHANCEMENT

Most of this germplasm is unadapted to growing conditions in the U.S. and requires genetic enhancement to make it adapted, or able to grow and mature in our environmental conditions. Enhancement basically means that these exotic materials will be bred with U.S. adapted materials and breeders will select progeny that carry the desired exotic traits and are also adapted to U.S. growing conditions. This will require a concerted long-term breeding approach by corn breeders at numerous locations (environments) throughout the U.S. Only after this process of enhancement will these exotic materials be ready to enter commercial corn breeding channels and be effectively utilized by a broad cross-section of the industry in the development of new hybrids for farmers and corn users.

The total process of enhancement is too large and long-term for public institutions and/or seed companies to accomplish individually. An ambitious task of this nature can only be completed through a coordinated and cooperative effort between the USDA/ARS, land-grant universities, and industry.

The Corn and Sorghum Basic Research Committee of the American Seed Trade Association has been concerned that enhancement of this exotic germplasm would proceed. The Committee consists of representatives from about 30 companies actively involved in the corn and sorghum seed industry, and at the committee's request, Dr. Linda Pollak, Research Geneticist, USDA-ARS, et al, developed a proposal for enhancing exotic germplasm starting with materials which will include the elite LAMP accessions as noted above. This proposal has developed into the U.S. GEM (Germplasm Enhancement of Maize) Project.

U.S. GEM PROJECT OUTLINE

Since this project serves a national need, the primary effort and direction has come from the USDA/ARS. Two permanent USDA/ARS locations are being used as primary sites for enhancement breeding and coordination. One is at Ames, Iowa, where the USDA/ARS currently conducts corn evaluation and enhancement efforts. Dr. Linda Pollak, Research Geneticist, is located there. Dr. Pollak was the Principal Investigator of the U.S.A. for LAMP, and is the lead scientist for this project.

The other permanent site is the USDA/ARS location in North Carolina. This site has responsibility for initial evaluation and conversion of the tropical materials. Tropical corn populations normally will not reach maturity in the Corn Belt, but will produce seed in North Carolina. After initial enhancement of the tropical materials in the South, they will be sent to Ames for further enhancement and testing in Corn Belt conditions. Dr. Marty Carson is in charge of this program.

A number of corn researchers at various land-grant universities and other ARS locations are also taking part in the enhancement and evaluation of this exotic germplasm. This cooperative effort is very important and serves not only as a source of improved germplasm but also provides excellent training for future plant scientists.

Industry is also involved. A total of 21 companies have pledged research nursery and yield trial plots to be used in this breeding effort. This in-kind support is valued at \$450,00 per year.

An important component of the project is an annual meeting of all cooperators to evaluate progress and plan strategies. An information network has been established to keep everyone up-to-date. A U.S. GEM Technical Steering Group consisting of members from USDA/ARS, University, and Industry has been formed for guidance and administration of this cooperative effort.

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This germplasm enhancement project is public and is open to all public sector institutions as well as private seed companies. Information will be freely available and publicly developed materials will remain in the public domain, accessible to all.

ACCOMPLISHMENTS IN 1996

Following is a description of accomplishments and research conducted at various locations using 1996 funding.

Ames, Iowa.—Priorities for the corn enhancement work at this location are overall project coordination, data analysis and management, management and release of enhanced germplasm, analysis of materials for value-added traits, and as one of the many breeding sites. In cooperation with Iowa State University, a postdoctoral food technologist is working on the utility of unique oils obtained from GEM accessions and a graduate student is studying environmental effects on starch quality measurements.

The laboratory is continuing to evaluate oil, starch, and protein in the exotic accessions and in the breeding populations made up of exotic materials crossed to proprietary corn belt inbreds. In results from this past year, a line from one breeding cross measured total protein of 16 percent (corn belt germplasm has 10 percent) and total oil level of 6 percent (corn belt is 4 percent). It is extremely unique to find increased levels for both of these traits in the same line, and it is potentially very useful for food and feed applications. High yielding lines are being developed from two breeding crosses with protein levels above 16 percent.

GEM's World Wide Web site opened on July 15, 1996. From this site cooperators can obtain the latest data from yield tests, disease and insect screening, and value-added trait research, as well as news and upcoming events.

Raleigh, North Carolina.—The focus of this location is twofold. One priority is to develop enhanced material adapted to the Southern U.S. corn growing conditions. The second is to be a stepping stone for adapting tropical material to Midwest conditions.

Breeding populations were tested for resistance to various leaf diseases and stalk rots. Selections were made for improved material with resistance to these diseases as well as for improved yield, standability, and adaptation to North Carolina conditions. For example, eight of the tropical x elite breeding crosses were more resistant to Gray leaf spot and eight were more resistant to Southern leaf blight than the most resistant commercial check hybrids. Twenty-three of these breeding crosses had average yields over twelve locations that were not significantly different from the commercial checks and two outyielded the commercial check hybrids.

Other public cooperators conducted evaluations as follows: Yield and Stewart's bacterial wilt data accumulation in Delaware. Resistance to fall armyworm and corn earworm at two locations in Georgia. Quantitative genetic study in Illinois. Corn rootworm and Fusarium ear rot resistance in Iowa. Grain physical properties, wet milling properties, starch functionality, and other value added grain traits in Iowa. Resistance to Aspergillus and maize weevil in Louisiana. Resistance to aflatoxin and southwestern corn borer in Mississippi. Resistance to corn rootworm in Missouri. Resistance to anthracnose stalk rot in New York. Physical and compositional grain quality in Ohio. Gray leaf spot resistance in Pennsylvania. Grain yield tests in Tennessee. Evaluation of silage quality in Wisconsin.

Demonstration nurseries were planted at Iowa, North Carolina and Kentucky for viewing by cooperators. Fall field days were held at Iowa and Ohio.

Yield trials were conducted on over 200 GEM breeding populations crossed to private elite inbreds. The top 15 breeding populations were sent to winter nurseries to self about 1000 plants each. The private cooperators will continue the breeding and adaption of these accessions following the protocol developed by the GEM Technical Steering Group. Companies increased their nursery and yield trial in-kind support by approximately 25 percent.

RESEARCH IN 1997

Research will continue at the various USDA/ARS, university, and company locations similar to 1996.

EFFECTS OF INCREASED FUNDING BEGINNING IN 1998

Appropriation of the additional \$500,000 annually would provide funds to increase research in the following ways:

Ames, Iowa.—Additional funding would provide laboratory equipment (NIR and HPLC) to conduct analyses of feed quality (approximately 60 percent of corn is fed to animals). An increase would provide money for purchasing a research plot combine for conducting yield trials. The increase in winter nursery funding would allow

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the Ames location to support the public breeding activities and allow public materials to reach commercial breeding programs in half the time. A small amount of money would be available to help public cooperators to attend the annual meeting and field day.

Raleigh, North Carolina.—This location has a number of equipment needs, such as seed counters, that have to be fulfilled in order to be fully equipped. Current resources restrict testing and development work to only two tropical x elite breeding crosses per year. With the increased funding, the number of breeding crosses could be tripled to 6 or more, greatly speeding up the introduction of adapted GEM material into private and public breeding programs. Additional funding would provide for yield trial testing at more locations and more extensive disease and insect resistance screening, greatly increasing the precision in selecting materials that are high yielding and have high levels of pest resistance.

Other Public Cooperators.—The increase in funding for public cooperators (to \$281,000 per year in the third fiscal year) would allow for full evaluation and development of new breeding materials improved for productivity as well as disease and insect resistance and value-added traits. It would also provide for the use of biotechnology tools in this development work. Most public cooperators are willing to participate, but cannot unless they have at least partial funding. There are approximately 30 public cooperators now, and as the project develops we are likely to have more. The full amount of funding for \$281,000 would allow 30 cooperators to each receive approximately \$9,700 per year to help fund their participation.

CONCLUSION

Corn hybrids in the U.S. have a very narrow genetic base, utilizing only a small percentage of all available corn germplasm. This greatly increases vulnerability to unforeseen pest problems, and may lead to an eventual yield cap. Exotic corn germplasm could provide genes for resistance to pest problems and for increased yields. These exotic materials may also contain quality traits to meet new market demands. This will help ensure the U.S. maintains its world leadership in providing the best raw materials to meet the demand for the production of meat, eggs, milk, and many other food and industrial uses.

The LAMP project identified the top 268 corn accessions from among 12,000 populations evaluated. The present proposal represents a joint USDA/ARS, land-grant university, and industry effort to enhance these and other exotic accessions so that they can enter commercial corn breeding programs. The result of this cooperation will be an increase in the productivity, quality, and marketability of hybrid corn in the U.S. and for export, benefiting the farmer, the feed and processing industries, and the consumer.

Therefore, the ASTA Corn and Sorghum Basic Research Committee hereby requests the 105th Congress of the United States to include funding of \$500,000 (in addition to the \$500,000 appropriated initially in 1996, for a total of \$1,000,000) annually for this corn germplasm enhancement project beginning with the 1998 federal budget.

BUDGET SUMMARY

This is a summary of the operational and capital budgets for 1997, 1998, and 1999; 1999 will only be operational. The budget is divided into the Corn Belt Location and corresponds to Ames, Iowa (USDA-ARS) and the cooperators in the Corn Belt area. The Southern Location corresponds with Raleigh, North Carolina (USDA-ARS) and the cooperators in states in the South. For a complete copy of the budget, please contact Dr. David Harper, Holden's Foundation Seeds, Inc., Box 839, Williamsburg, IA 52361 or call 319-668-1100.

Items	1997	1998	1999
Corn belt location:			
Taxes & Reductions	\$17,000	\$3,900	\$3,900
Personnel	146,840	178,700	197,600
Office/field	42,160	71,900	88,500
Capital equipment	34,000	249,000	60,000
Specific agreements for public cooperators ¹	60,000	96,500	250,000
Total for corn belt location	300,000	600,000	600,000

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Items	1997	1998	1999
Southern location:			
Personnel	78,000	125,000	128,000
Office/field	23,000	57,000	54,000
Capital equipment	19,000	68,000	68,000
Specific agreements for public cooperators ¹	30,000	50,000	50,000
Total for southern location	150,000	300,000	300,000
USDA/ARS: Total USDA/ARS overhead	50,000	100,000	100,000
Summary:			
Corn belt location	300,000	600,000	600,000
Southern location	150,000	300,000	300,000
USDA/ARS overhead	50,000	100,000	100,000
Grand total	500,000	1,000,000	1,000,000

¹ Specific Agreements for Public Cooperators: Agreements for public cooperation can be made with universities and ARS scientists in many locations which could include the following states: Delaware, Georgia, Illinois, Indiana, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New York, North Dakota, North Carolina, Ohio, Pennsylvania, South Dakota, Tennessee, Texas, and Wisconsin. Research at these locations would include selection for disease and insect resistance, evaluation for value added traits, and yield trials.

PREPARED STATEMENT OF STEVE RAFTOPOULOS, PRESIDENT, AMERICAN SHEEP INDUSTRY ASSOCIATION

The American Sheep Industry Association (ASI) is a federation of state member associations representing the nearly 80,000 sheep producers in the United States. The sheep industry views numerous agencies and programs of the U.S. Department of Agriculture as important to lamb and wool production. Sheep industry priorities include rebuilding and strengthening our infrastructure, critical predator control activities, maintaining and expanding research capabilities and animal health efforts.

The rapid changes that have occurred in the domestic sheep industry and continue to take place put further emphasis on the importance of adequately funding the U.S. Department of Agriculture programs important to lamb and wool producers.

We appreciate this opportunity to comment on those portions of the USDA fiscal year 1998 budget.

ANIMAL AND PLANT HEALTH INSPECTION SERVICE (APHIS)

The mission of APHIS, "to protect U.S. animal and plant resources from diseases and pests," is very important to the sheep industry of the nation.

Animal Damage Control

The Animal Damage Control (ADC) program of USDA-APHIS is vital to the economic survival of the sheep industry. The value of sheep and lambs lost to predators and predator control expenses are second only to feed in sheep production costs. Costs associated with predation now exceed our industry's veterinary costs, labor, and transportation costs.

The sheep industry adamantly disagrees with the Administration's budget proposal to reduce operation funding for ADC.

A reduction cannot be justified, neither can a 50/50 ratio of cooperator funding for all states. The ratio is strictly an arbitrary number with no justification in statute or regulation or policy. Furthermore such a ratio ignores a great variety of factors upon which the need for ADC operations is based. These factors include types of livestock and populations, geographical differences, public lands, endangered species present or being reintroduced, presence of major airports, aquaculture, and high risk crops as well as the presence of wildlife borne diseases such as rabies, plague, and Lyme disease in each respective state. These elements form the basis for the complex Finding efforts in the states.

The Administration proposal would jeopardize cooperative programs nationwide in wildlife damage management—human health and safety, transportation safety, disease control and protection of this great nation's agricultural resources. The Administration has once again announced another wolf reintroduction program, this one

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to put the Mexican wolf in the Southwest. And yet the Administration has chosen to ignore what has been proven in several states around Yellowstone National Park where federal introduction of wolves has placed tremendous burdens on the ADC resources.

The sheep industry strongly supports the funding for operations of ADC for fiscal year 1998 at \$30,281,600, an increase of \$3,314,600 over the fiscal year 1997 level.

In 1994, the National Agricultural Statistics Service reported that the sheep industry lost 520,600 sheep and lambs to predators! Since 1990, predator losses have increased from nearly 5 percent of the total U.S. sheep inventory to 7 percent of the inventory. In states such as Idaho, Montana, and Wyoming, sheep and lamb losses to predators increased 33.5 percent between 1990 and 1994. The value of these state's sheep losses increased 53.2 percent to over \$7.2 million. It should be noted that these states have a large amount of public lands on which the industry depends.

Not only are sheep industry losses to predators significantly increasing, but also total agriculture and non-agricultural requests for ADC are increasing. Agricultural requests for ADC assistance increased from 52,000 in 1988 to 99,000 in the latest report. During this time period, urban requests for ADC assistance increased from 3,635 to 84,199 which shows the need for increased funding, not less.

The point cannot be over stressed. The ADC program is an important and necessary government service. The purposes of the program are to control wildlife and pest damage to agriculture, other wildlife, aquaculture, forest, range and other natural resources; to protect public health and safety through control of wildlife-borne disease; and to control wildlife hazards at airports. Many sectors of agriculture, wildlife management and public health and safety rely heavily on the ADC program whose services are provided through a partnership between federal, state, and private interests. If the Administration's goal is to forge stronger partnerships, then reducing Finding will only diminish long standing and newly formed cooperative relationships.

ASI has worked with and relied upon the USDA APHIS/ADC program to assist in reducing predator losses on sheep. The ADC program is charged to provide federal leadership in managing problems caused by wildlife. Our industry recognizes that ADC is in dire need of additional resources to meet existing and new demands.

Rather than reducing the funding for this program, we need to modernize it by providing resources to allow use of trap monitors and tranquilizer devices on traps. While not feasible to have every trap equipped in this manner given the cost, work load, and state mandates, these devices would address concerns where threatened or endangered species or sensitive species are present, and allow the ADC program to safely and humanely remove these animals from traps. Monitors and devices to assist with safe removal of these animals at \$457,600 are a necessary funding increase to ADC.

A main strength of the ADC program is the professional leadership provided in the complex field of wildlife damage management. This opinion is not only held by the sheep industry, but by the rest of the wildlife management community. The demands for professional leadership in wildlife damage management are increasing and to meet the need, an additional \$1 million is strongly supported.

The Omnibus Budget Reconciliation Act of 1993 mandates that federal agencies convert radio systems to narrow band radios before the year 2005. After that date, ADC will no longer be allowed to use existing wide-band radios and due to the nature of ADC's work in rural areas, a funding increase of \$1,857,000 is needed to purchase new repeaters, base stations, portable and mobile radios.

Research in animal damage control is also important to the sheep industry. The long-term ability to protect livestock depends on the development of effective control methods through adequately funded research programs. We supported the increased funding of \$926,000 in fiscal year 1997 to relocate the Denver Wildlife Research Center employees to the National Wildlife Research Center facilities at Ft. Collins, Colorado. This funding should be maintained and dedicated to the development of new and effective control methods to address predator problems facing livestock producers. The sheep industry supports the fiscal year 1998 funding level for the Methods Development at \$10,951,000 to adequately address research in depredation on livestock.

Scrapie

Adequate Finding of the Voluntary Scrapie Flock Certification Program through USDA-APHIS is of critical importance to the sheep industry, as well as all segments of the livestock industries. ASI appreciates this Subcommittee's efforts in recognizing the seriousness of this devastating disease and the real need for control and eradication. Sheep producers are now paying over 50 percent of the total cost. We

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request that this program be funded adequately in fiscal year 1998 under the "Animal Health Monitoring and Surveillance" line item at least at the fiscal year 1997 level.

No country has, to date, conducted an active surveillance study of scrapie. ASI has requested that APHIS conduct a national surveillance study of scrapie since our industry's ability to compete in the market place is encumbered by both existence of scrapie in our flock and the lack of quantitative data about the disease. Additional appropriations up to \$200,000 are supported by the industry to enhance completion of this critical surveillance effort.

AGRICULTURAL MARKETING SERVICE

Lamb market information and price discovery systems

The sheep industry strongly supports continued appropriations at the fiscal year 1997 levels for USDA-Agricultural Marketing Service and the National Agricultural Statistics Service to proceed with market information and price discovery systems for lamb. In addition to current market information and reports, retail price reporting for lamb and lamb import prices and data collection are key initiatives which need to be implemented to keep pace with the meat industry on a domestic and international basis.

FOREIGN AGRICULTURAL SERVICE (FAS)

The sheep industry participates in FAS programs such as the Market Access Program (MAP) and the Foreign Market Development Program. ASI strongly supports continued appropriations at the fiscal year 1997 level for these critical Foreign Agricultural Service programs. ASI is the cooperator for American wool and sheep genetics and has achieved remarkable success in increasing exports of domestic wool, breeding sheep and semen. Wool exports have increased 170 percent over the last five years with the aid of this funding. American lamb sales also benefit from the Foreign Market Development Program through increased international efforts.

NATURAL RESOURCES CONSERVATION SERVICE (NRCS)

ASI urges increased appropriations for the range programs of the Soil Conservation Service to benefit the private range and pasture lands of the United States with conservation assistance. We support the budget item and recommend an increased level for the Grazing Lands Conservation Initiative which ASI has worked with, along with other livestock and range management organizations, to address this important effort for rangelands in the U.S.

RESEARCH, EDUCATION AND ECONOMICS

The sheep industry recognizes that it must be globally competitive, profitable and sustainable as a user of and contributor to our natural resource base; that production and processing practices must be environmentally sound, socially acceptable and must contribute to the goals and overall well-being of families and communities. It is therefore essential that an integrated systems approach be used, focusing on problem-oriented programs utilizing interdisciplinary team efforts. These efforts should be applied both to plan and to conduct research on complex problems as well as to apply problem-solving technologies on farms and ranches through quality educational programs.

Linking science and technology to societal benefits was the theme of the "Food Animal Integrated Research for 1995" (FAIR 1995) symposium. Research and education priorities were agreed upon by a cross-section of society from farmers to consumers. The FAIR 1995 report combined with the sheep industry Research, Development, and Education Priorities paper list the priority funding needs of the industry in these areas.

Agricultural Research Service

ASI recommends the continued support and expansion of the scrapie/BSE and other TSE research initiatives at Pullman, Washington and Ames, Iowa. The collaborative research that is ongoing at these locations is recognized world wide and will be key in finding solutions to these disease problems. We believe regulatory initiatives to prevent, control and eradicate TSE's in our livestock populations will work when based on sound research information.

COOPERATIVE STATE RESEARCH EDUCATION AND EXTENSION SERVICE (CSREES)

We strongly support the National Research Initiative (NRI) and we appreciate the Administration's request of \$130 million. The competitive grants awarded under its

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program are for the highest quality research addressing the goals and objectives of FAIR 1995.

The ongoing research in wool is critically important to the sheep industry. ASI supports continued funding of \$212,000 for fiscal year 1998 through the special grants program of the CSREES.

We urge the subcommittee to appropriate both intramural and extramural funding for research to measure the well being of livestock. Animal well being is an emotional issue; in order to consider new management strategies for the enhancement of animals, we need improved methods of measurement.

The industry greatly appreciates this opportunity to discuss these programs and appropriations important to the sheep industry.

PREPARED STATEMENT OF DIANE VANDE HEI, EXECUTIVE DIRECTOR, ASSOCIATION OF METROPOLITAN WATER AGENCIES

Thank you for the opportunity to provide the subcommittee with this testimony on fiscal year 1998 appropriations for the Department of Agriculture's conservation programs.

The Association of Metropolitan Water Agencies (AMWA) is composed of the nation's largest publicly owned metropolitan drinking water suppliers, serving over 100 million Americans with clean, safe drinking water.

AMWA places a strong emphasis on source water protection and control of nonpoint sources of pollution and looks to the agriculture community for stewardship of our natural waterways. Through various management practices like waste containment, buffer zones, filter strips and targeted fertilizer and pesticide applications, our nation's rivers and streams and the people who use the water as a source of drinking water stand to benefit.

CRP AND EQIP

AMWA was proud to support the conservation programs in the Federal Agricultural Improvement and Reform Act of 1996 (the FAIR Act), especially the redirection of the Conservation Reserve Program (CRP) to focus on more environmentally sensitive land and the new Environmental Quality Incentives Program (EQIP). If the Department administers CRP in such a way that is consistent with the intent of the Fair Act, thousands of miles of waterways nationwide should see noticeable water quality improvements. EQIP holds great promise to reduce pollution loading from land erosion, pest control and animal waste. These and other important programs are funded through the Commodity Credit Corporation as mandated by the FAIR Act. AMWA appreciates Congress' support for these two programs.

CONSERVATION OPERATIONS

Some of the most valuable programs of the Department are those offering technical assistance through the Natural Resources Conservation Service (NRCS). These extremely important efforts help farmers through NRCS field offices and staff to plan and implement conservation systems to reduce erosion, improve soil and water quality, reduce flooding and improve woodlands. Combined, these practices are key contributors to the improved quality of sources of drinking water. AMWA fully supports the Secretary of Agriculture's budget request for Conservation Operations.

WATER RESEARCH

An integral component of source water protection is research into how agriculture affects water quality. Understanding how best to manage and conserve soil, water and air resources, control animal waste, conserve water and assess the impact of pesticides minimizes the negative effects of agriculture on the environment. AMWA encourages the subcommittee to adequately fund the research conducted through the Agricultural Research Service and the Cooperative State Research, Education and Extension Service.

There are many conservation programs at the Department of Agriculture not mentioned here. Nevertheless, AMWA would like to express its support to the subcommittee for adequate funding of all the conservation efforts affecting water quality.

Since the Clean Water Act was enacted 25 years ago, our nation's waterways have improved dramatically mainly through point source controls. Given that nonpoint source pollution from agriculture is still the major remaining problem, the drinking water community looks to Congress and the USDA's conservation programs to assist

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farmers, who are stewards of our land and water, to protect the nation's sources of drinking water.

Thank you, again, for allowing AMWA the opportunity to submit this testimony. If my staff or I can be of any assistance, please call.

PREPARED STATEMENT OF BERNARD H. BERNE, M.D., PH.D.

I am a resident of Arlington, Virginia. I serve the Food and Drug Administration (FDA) as a Medical Officer and as a reviewer medical device approval applications. I am testifying as a private individual. I ask your Subcommittee to appropriate \$4,000,000 for FDA to study the feasibility of consolidating its facilities at the Southeast Federal Center or at another site in the District of Columbia.

The FDA Revitalization Act (Public Law 101-635, Nov. 28, 1990) (104 Stat. 4583 et seq.) authorizes the Secretary of Health and Human Services (the Secretary), in consultation with the Administrator of the General Services Administration (GSA), to "enter into contracts for the design, construction, and operation of a consolidated Food and Drug Administration administrative and laboratory facility." It is therefore the responsibility of your Subcommittee to initiate the appropriations of funds to permit the Secretary to develop this single facility.

In the past, Treasury, Postal Services, and General Government Appropriations Acts have appropriated funds to GSA to construct separate consolidated FDA facilities in Montgomery and Prince George's Counties, Maryland. Public Law 101-635 did not authorize these appropriations, since this law only authorized a single facility and only authorized the GSA Administrator to consult with the Secretary regarding this project.

Further, because of a 1995 rescission (Public Law 104-19, July 17, 1995) and the lack of proper authorization for later appropriations, there are presently no funds available to GSA or to FDA to design, construct, or operate the consolidated facilities.

GSA is presently making plans to develop the two new separate consolidated facilities for FDA. These facilities would be located far from each other in College Park in Prince George's County and in White Oak in Montgomery County. If supported by appropriations, GSA's plans would negate the goal of Public Law 101-635, which authorizes only a single consolidated facility.

There does not appear be any benefit to the government for FDA to consolidate in two locations, rather than in one. This is a wasteful type of consolidation that is not cost-effective to the government or to the public.

In 1991, a Conference Committee of the Treasury, Postal Services, and General Government Subcommittees (Treasury-Subcommittees) of the House and Senate Committees on Appropriations created this double "consolidation" so that the two facilities would serve the political jurisdictions represented by certain members of the Treasury Subcommittees (House Report 102-234 (Oct. 3, 1991)). This so-called "consolidation" would benefit neither FDA, the federal government, the general public, the federal taxpayer, nor the Washington Metropolitan Area.

The Congressional division of the single consolidated facility and the forced suburban locations of the resultant FDA buildings contradicted both Public Law 101-635 and an existing Executive Order that is designed to strengthen the Nation's central cities. The location of the facilities also contravened a long-standing National Capital Region Planning Commission goal of retaining and increasing federal employment in the District of Columbia. It is difficult to find a worse example of "pork-barrel" legislation.

It is therefore necessary for your Subcommittee to review this situation and to appropriate funds to the Secretary of Health and Human Services (not to the GSA Administrator) to design and construct a single consolidated FDA headquarters facility. Your Subcommittee also needs to encourage the Secretary to locate the facility at a site that conforms with existing Executive Orders and Presidential policies that direct the placement of federal facilities in urban areas and in the National Capital Region. Previous appropriations acts relating to the FDA consolidation have disregarded these Orders and policies.

Former President Jimmy Carter's Executive Order 12072 (August 19, 1978, 43 F.R. 36869 (Federal Space Management)) states in Section 1-1 (Space Acquisition), Subsection 101: "Federal facilities and Federal use of space in urban areas shall serve to strengthen the nation's cities and to make them attractive places to live and work. Such Federal space shall conserve existing urban resources and encourage the development and redevelopment of cities."

Section 1-1, Subsection 1-103 of the Executive Order states: "Except where such selection is otherwise prohibited, the process for meeting Federal space needs in

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urban areas shall give first consideration to a centralized community business area and adjacent areas of similar character, including other specific areas which may be recommended by local officials." Section 1-3, Subsection 1-301 of the Executive Order states: "The heads of Executive agencies shall * * * economize on their use of space."

President William J. Clinton has reaffirmed the Administration's commitment to Executive Order 12072 in his Executive Order 13006, May 21, 1996 (61 F.R. 26071). Section 1 (Statement of Policy) states: "Through the Administration's community empowerment initiatives, the Federal Government has undertaken various efforts to revitalize our central cities, which have historically served as the centers for growth and commerce in our metropolitan areas. Accordingly, the Administration hereby reaffirms the commitment set forth in Executive Order No. 12072 to strengthen our nation's cities by encouraging the location of Federal facilities in our central cities."

In March, 1997, President Clinton ordered his Cabinet Secretaries to assure that federal agencies do not leave the District of Columbia. The President considers this action to be an important element in his plan to revitalize the District.

Despite all of the above Executive policies and orders, GSA and FDA are presently planning to locate the major consolidated facility on a sprawling 130-acre site at White Oak, Maryland. According to GSA's 1956 Draft Environmental Impact Statement for the project, no building on this campus-like site would exceed six stories in height. The campus' site plan is clearly not intended to economize on the use of space.

White Oak is located about a mile outside of the Capital Beltway in a suburban area of Montgomery County that is far from any centralized business area, is not in any city, and is three miles from the nearest Metrorail station. The highways and roads near White Oak are among the most congested and dangerous of all traffic arteries in the Washington Metropolitan Area.

If implemented as GSA intends, the Prince George's and Montgomery Counties consolidations would relocate about 1,000 FDA employees out of D.C. and would encourage associated development to occur in the District's suburbs, rather than in the District itself. The White Oak facility's decentralized location would discourage FDA's visitors and employees from using Metrorail and would force nearly all employees to drive to work. FDA's consolidations would therefore serve to weaken a central city, rather than to strengthen it.

Your Subcommittee needs to take control of the FDA consolidation process and to stop this wasteful type of planning. Appropriations legislation should encourage the Secretary to consolidate FDA in a compact facility that can fit into the District of Columbia's central business area and is convenient to Metrorail.

It is not difficult to achieve such an economy of space. FDA's major headquarters presently occupy an 18-story building (the Parklawn Building in Rockville, MD). Further, the National Institutes of Health constructed in 1980 a 13-story building at its Clinical Center in Bethesda, MD, to house many of its clinical research laboratories. The FDA consolidated facility can thus be entirely accommodated in several high-rise buildings located close to each other in Washington, D.C.

GSA controls a large amount of underutilized federal space at the Southeast Federal Center. This space is located next to the Navy Yard Metrorail station in downtown Washington, D.C.

The Southeast Federal Center is only a mile from Capitol Building and from the headquarters of the Department of Health and Human Services in the Hubert H. Humphrey Building. It is thus an ideal site for the FDA consolidation.

The Southeast Federal Center can easily accommodate the FDA consolidation. No appropriated funds are presently available to construct any federal facilities at this location, which is largely vacant or occupied by obsolescent facilities.

In the National Capital Planning Commission's March, 1996, Plan for Washington's Monumental Core, a proposal in the category of "Economic Development" states: "Assist the transformation of the Southeast Federal Center and adjacent Navy Yard into a lively urban waterfront of offices, restaurants, shops and marinas."

An FDA office and laboratory facility at the Southeast Federal Center would be fully consistent with this goal. The facility would further help to compensate for the relocations of thousands of federal employees from the District of Columbia to suburban sites in Maryland and Virginia that have taken place in recent years. During the last two decades, these relocations have contradicted Executive Order 12072 and have greatly contributed to the decline of the District's economy.

Because of budgetary constraints and of FDA's uncertain future, your Subcommittee should not appropriate a large amount of funding to the Secretary for the FDA consolidation at this time. However, a small appropriation is needed to encourage

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FDA and GSA to begin to plan for a consolidation at the Southeast Federal Center or at another location in the District of Columbia.

I therefore request that your Subcommittee initiate a 1998 appropriation of \$4,000,000 to FDA for the specific purpose of studying the feasibility of constructing a single consolidated FDA administrative and laboratory headquarters facility in Washington, D.C. Legislative or Committee Report language can direct or request the Secretary to give first consideration to the Southeast Federal Center as the site for the consolidation.

Thank you.

PREPARED STATEMENT OF MICHAEL P. KENNY, EXECUTIVE OFFICER, CALIFORNIA AIR RESOURCES BOARD; ROBERT J. CABRAL, SUPERVISOR, SAN JOAQUIN COUNTY, CHAIRMAN OF THE BOARD, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT; MANUEL CUNHA, JR., PRESIDENT, NISEI FARMERS LEAGUE; LES CLARK, VICE PRESIDENT, INDEPENDENT OIL PRODUCERS' ASSOCIATION; AND CATHERINE H. REHEIS, MANAGING COORDINATOR, WESTERN STATES PETROLEUM ASSOCIATION, ON BEHALF OF THE CALIFORNIA INDUSTRY AND GOVERNMENT COALITION ON PM-10/PM-2.5

Mr. Chairman and Members of the Subcommittee: On behalf of the California Industry Government Coalition on PM-10/PM-2.5, we are pleased to submit this statement for the record in support of our fiscal year 1998 funding request of \$2,125,000 for the California Regional PM-10/PM-2.5 Air Quality Study. Our request includes \$436,500 (one-half of the historical baseline split between California and Washington) from CSREES, an additional allotment of \$1,563,500 from CSREES for critical in-field studies, and \$125,000 from the ARS-requested \$968,000 appropriation to be targeted to California.

The San Joaquin Valley of California and surrounding regions exceed both state and federal clean air standards for small particulate matter, designated PM-10/PM-2.5. The 1990 federal Clean Air Act Amendments require these areas to attain federal PM-10/PM-2.5 standards by December 31, 2001. Attainment of these standards requires effective and equitable distribution of pollution controls that cannot be determined without a major study of this issue.

According to EPA and the California Air Resources Board, existing research data show that air quality caused by the PM-10/PM-2.5 problem has the potential to threaten the health of more than 3 million people living in the region, reduce visibility, and impact negatively on the quality of life. Unless the causes, effects and problems associated with PM-10/PM-2.5 are better addressed and understood, many industries will suffer due to production and transportation problems, diminishing natural resources, and increasing costs of fighting a problem that begs for a soundly researched solution.

PM-10/PM-2.5 problems stem from a variety of industry and other sources, and they are a significant problem in the areas that are characteristic of much of California. Typical PM-10/PM-2.5 sources are dust stirred up by vehicles on unpaved roads, and dirt loosened and carried by wind during cultivation of agricultural land. Soil erosion through wind and other agents also leads to aggravation of PM-10/PM-2.5 air pollution problems.

The agriculture portion of this study will be developing specific types of information, tools and techniques needed to develop an inventory and the management practices that will most likely be part of the control strategies. They are: (1) validate method or methods for accurately measuring fugitive PM-10/PM-2.5 emission rates from an individual site or operation; (2) a method to easily and quickly estimate PM-10/PM-2.5 emissions; (3) an accurate inventory of fugitive PM-10/PM-2.5 dust sources by individual farming operations; (4) validated (field tested) best management practices; (5) a clear understanding of significant factors that effect PM-10/PM-2.5 emissions; and (6) a workable, validated model or models for predicting PM-10/PM-2.5 emission, based on operational parameters.

The primary focus of the short term objectives is on those soils, practices, and conditions presumed to have the highest PM-10/PM-2.5 emissions. Priority for this work will be focused on the following situations, practices, and crops within the study area.

Almond, Walnut, and Fig Harvest: Preparation for harvest; Shaking trees; Windrowing; Picking up nuts; and Ambient conditions before and after.

Dairy Industry: Dairy Lagoons and Livestock Corrals.

Cotton Harvest: Harvesting—1st and 2nd picking; Shredding of stalks; Stalk incorporation; and Ambient conditions before and after.

Feedlots: Feedlot activities.

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Fall/Spring Land Preparation: Deep tillage; Discing; Land planning; Bed formation; and Ambient conditions before and after.

Grain Harvesting: Harvesting; Stubble incorporation; Discing; and Burning.

Land Leveling: Appropriate practices.

The importance of this study on PM-10/PM-2.5 is underscored by the need for more information on how the federal Clean Air Act Amendments standards can be met effectively by the business community, as well as by agencies of federal, state and local government whose activities contribute to the problem, and who are subject to the requirements of Title V of the Clean Air Act. There is a void in our current understanding of the amount and impact each source of PM-10/PM-2.5 actually contributes to the overall problem. Without a better understanding and more information—which this study would provide—industry and government will be unable to develop an effective attainment plan and control measures.

Agriculture wants to be a part of the effort to solve this major problem, but to do so, we need federal assistance to support research and efforts to deal effectively with what is essentially an unfunded federal mandate.

Agriculture and industry, in concert with the State of California and local government entities, are attempting to do our part, and we come to the appropriations process to request assistance in obtaining a fair federal share of financial support for this important research effort. In 1990, our Coalition joined forces to undertake a study essential to the development of an effective attainment plan and effective control measures for the San Joaquin Valley of California. This unique cooperative partnership involving federal, state and local government, as well as private industry, has raised more than \$15 million to date to fund research and planning for a comprehensive PM-10/PM-2.5 air quality study. Our cooperative effort on this issue continues, and our hope is that private industry and federal, state and local governments will be able to raise an additional \$12 million over the next three years to fund this important study.

The following is a list of PM-10/PM-2.5 research projects which are in progress:

- Planning*.—Development of products for emissions, field monitoring, data analysis and modeling.
- Technical support studies*.—Suitability of data base; Winter/Autumn intensive study; micrometeorological parameters; fog formation/dissipation; and ammonia from soils.
- Modeling*.—Demonstration of modeling system for application in SIP's.
- Data analysis*.—Analysis of existing data to aid project planning.
- Demonstration studies*.—Almond, fig, walnut, cotton, harvesting; unpaved agricultural roads; unpaved public roads; unpaved shoulders of paved roads; dairies, feedlots, poultry, dry cereal grain.

For fiscal year 1998, our Coalition is seeking \$2,125,000 in federal funding through the U.S. Department of Agriculture to support continuation of this vital study in California. In the budget for the Cooperative State Research, Education, and Extension Service (CSREES), we request \$436,500, representing one-half of the \$873,000 historical baseline split between California and Washington in the past two budget cycles. Additionally, we request \$1,563,500 from CSREES specifically targeted to California to support and accelerate critical research activities underway at the University of California at Davis, and especially to provide support and funding for the development of control measures that have emerged from the project's research efforts to date.

This additional funding request will support timely and critical in-field testing that must be done in fiscal year 1998. The efforts of the UCD program to date have been focused on measuring the amount of PM-10 and PM-2.5 generated by agricultural practices. The initial proposal submitted in 1994 included a budget of approximately \$900,000/year. Although the program was approved in concept the funds were split between California and Washington. We have made tremendous progress in measuring fluxes from the harvesting of almonds, walnuts, figs, cotton, and wheat and, at the same time, have made preliminary measurements on the pollutants emitted from dairies and feedlots. While the Coalition appreciates the funding from USDA to date, our research has actually been slowed because of the reduced funding level. The additional amount being requested from CSREES will allow us to "catch up" to the funding levels initially proposed, so that critical base measurements can be researched in a timely manner.

In addition, the research to date has expanded the scope of the original proposal. Inhalable particulate matter in the San Joaquin Valley is composed primarily of PM-2.5 particles during the winter months when exceedances of the air quality standards occur most frequently. The dominant form of these particles is secondary ammonium sulfate. Although it is thought that most of the ammonia emitted in the San Joaquin Valley derives from livestock operations (dairies, feedlots, poultry oper-

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ations), few quantitative measurements have been made to fully quantify these sources, and evaluation of NO and NH₃ emissions from soils requires further detailed work. The new technology we wish to employ in this project will allow us to measure the complete ammonia flux from the livestock facilities, without the need to completely envelop the facility with fixed samplers. Further, the ammonia and nitrogen oxide emissions for fertilized fields vary considerably over time, so they are difficult or impossible to measure using our current technology. We have developed a new method that uses a sensitive, fast-response laser to measure the concentrations. The new project will apply this instrument in a variety of locations to measure the time-variable emissions of ammonia and nitrogen oxides for the soil, especially following fertilization. We will also measure the emissions from non-fertilized grassland, a large land use category that surrounds the San Joaquin Valley. The cost associated with this work is approximately \$350,000 a year.

The University of California at Davis (UCD) continues to improve the instrumentation to measure the wide range of atmospheric pollutants required in the San Joaquin Valley. We wish to continually improve the methodologies for measuring emission rates and to improve the spatial resolution of our measurements. Furthermore, to understand the new project, UCD will be proposing a second device that will enable us more accurately to measure the dust emissions for a dispersed source (e.g. a field). The cost of such a device and operating costs amortized over a 4-year period are \$450,000 a year.

Finally, initial discussions have begun with equipment manufacturers to explore the possibilities of cost-effectively reducing emissions from nut harvesters and devices used in land preparation. This effort will explore ways to reduce dust emission without serious adverse effects on the agricultural community. These discussions are preliminary, but it is estimated that support in the range of \$300,000 a year would be needed to advance this research.

In the budget for the Agricultural Research Service (ARS), we request that \$125,000 of the PM₁₀/PM_{2.5} funding requested by ARS be directed to the ARS facility in Fresno, California, to assist the PM₁₀/PM_{2.5} study in coordination with UC/Davis.

The California Regional PM₁₀/PM_{2.5} study will not only provide vital information for a region identified as having particularly acute PM₁₀/PM_{2.5} problems, it will also serve as a model for other regions of the country that are experiencing similar problems. The results of this study will provide improved methods and tools for air quality monitoring, emission estimations, and effective control strategies nationwide. Consequently, the beneficial results of this research will contribute to national policy as well.

The Coalition appreciates the Subcommittee's consideration of this request for a fiscal year 1998 appropriation of \$2,125,000 for U.S.D.A. to support the California Regional Region PM₁₀/PM_{2.5} Air Quality Study.

PREPARED STATEMENT OF DR. MELVIN C. RAY, ACTING VICE PRESIDENT FOR RESEARCH, MISSISSIPPI STATE UNIVERSITY; CHAIR, MISSISSIPPI EPSCoR COMMITTEE

Mr. Chairman and Members of the Subcommittee, I would like to thank you for the opportunity to submit this testimony regarding the U.S. Department of Agriculture Experimental Program to Stimulate Competitive Research (USDA EPSCoR). USDA EPSCoR is extremely important to the state of Mississippi and to our nation, and I appreciate the opportunity to testify.

I would also like to thank you, Mr. Chairman, for your support of this program. USDA EPSCoR would not be possible without your efforts and your strong support. You know, Mr. Chairman, that USDA EPSCoR is having a significant impact in Mississippi. I deeply appreciate your support of this program, and I thank you for all of your fine work representing Mississippi in the United States Senate.

I would like to begin with a brief summary of the importance of USDA EPSCoR to Mississippi. USDA-funded research is making a significant impact on efforts to improve Mississippi's science and technology (S&T) capability. In 1990 Mississippi had one award, a \$120,000 grant to a single investigator, from USDA's National Research Initiative Competitive Grants Program (NRICGP). In 1996, awards to Mississippi researchers from the NRICGP totaled \$746,568—an increase of more than 500 percent. Even more significant than the increase in dollar amount is the fact that eleven researchers at two institutions were the recipients. The previous year, nine investigators at three institutions, including the medical center, received \$811,183.

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This increase is a clear indication of EPSCoR's success. EPSCoR is helping researchers in Mississippi and the other EPSCoR states¹ improve the quality of their research and improve our nation's R&D capability. We attribute Mississippi's success to USDA EPSCoR, which was implemented in 1992. The bulk of Mississippi's funding increase since 1990 has been in the non-EPSCoR Standard Research Grants program. fiscal year 1992 funding was double our fiscal year 1991 amount, and researchers at several institutions in the state continue to become more competitive.

Important examples of Mississippi's research include such varied studies as kenaf processing, which is a potential economic opportunity for rural states; rapid detection of E coli, an important safety issue that has been in the news recently; and disease mechanisms in channel catfish, impacting a significant cash crop across the southern part of the country. These projects and those they represent address important issues not only to rural states, but to the rest of the nation. Because of this important program, fine researchers are able to contribute to our economy and our knowledge base.

EPSCoR is needed because our nation's R&D funds have historically been concentrated in just a few states. That means our country has undoubtedly missed many important research opportunities. Congress created the first EPSCoR program in the National Science Foundation in 1979 as a means to ensure that all regions of the country, not just a small number of states, have a science and technology capability sufficient to help meet our nation's R&D needs. Students across the country deserve access to the high-quality education and research that go along with a high-quality R&D base.

Allow me to give the Subcommittee just a brief overview of the USDA EPSCoR program. All academic institutions within USDA EPSCoR states are eligible to apply to the Strengthening Awards Program. USDA defines EPSCoR states as those that have had a funding level from the USDA National Research Initiative Competitive Grants Program (NRICGP) no higher than the 38th percentile of all states, based on a 3-year rolling average. All U.S. territories and possessions and the District of Columbia are also eligible.

USDA EPSCoR funds projects that improve the research capacity of researchers and institutions in USDA EPSCoR states. EPSCoR funds only high quality, peer-reviewed research. Let me stress that all proposals must relate to the program areas of the NRICGP—areas that address critical agricultural issues of importance to USDA. USDA EPSCoR provides four kinds of awards: Research Career Enhancement Awards, Equipment Grants, Seed Grants, and the Strengthening Standard Research Project Award.

- Research Career Enhancement Awards help faculty enhance their research capabilities by funding sabbatical leaves. Applicants may not have received a NRICGP competitive research grant within the past five years.
- Equipment Grants strengthen the research capacity of institutions in USDA EPSCoR states. The organization submitting the grant must commit to providing 50 percent of the total cost from non-federal sources.
- Seed Grants enable researchers to collect preliminary data in preparation for applying for a standard research grant. Seed Grant awards are limited to a total cost of \$50,000 and are non-renewable. Applicants must indicate how the research will enhance future competitiveness in applying for standard research grants.
- Strengthening Standard Research Project Awards fund standard research projects of investigators who have not received a NRICGP grant within the past five years.

USDA EPSCoR provides our country with needed, high-quality, peer-reviewed research. It allows all regions of the country to contribute to our nation's science and technology capability while allowing flexibility to meet regional research needs. Because EPSCoR awards are matched with state funds, it is a sound investment of taxpayer dollars.

Mr. Chairman, this Subcommittee has for the past several years directed USDA to set-aside 10 percent of USDA NRICGP funds for USDA EPSCoR. Those funds have provided significant success in Mississippi and in the other EPSCoR states. I request that, as it has done in previous years, the Appropriations Committee direct USDA to set aside 10 percent of its NRI competitive grant funds in fiscal year 1998 for an EPSCoR program. These funds will allow the EPSCoR states to continue providing for the agricultural research needs of rural America and of our nation.

¹For fiscal year 1997, USDA-EPSCoR states include: Alaska, Arkansas, Connecticut, Delaware, Hawaii, Idaho, Maine, Mississippi, Montana, Nevada, New Hampshire, New Mexico, North Dakota, Rhode Island, South Carolina, South Dakota, Utah, Vermont, West Virginia, and Wyoming. All U.S. territories and possessions and the District of Columbia are also eligible.

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I thank the subcommittee for the opportunity to submit this testimony.

PREPARED STATEMENT OF THE COALITION TO PROMOTE U.S. AGRICULTURAL EXPORTS

As members of the Coalition to Promote U.S. Agricultural Exports, we commend the Chairman and members of the Subcommittee for their interest and support of U.S. agriculture and express our appreciation for this opportunity to share our views.

The Coalition to Promote U.S. Agricultural Exports is an ad hoc coalition of over 80 organizations, representing farmers and ranchers, cooperatives, small businesses, regional trade organizations and the State Departments of Agriculture. We believe the U.S. must continue to have in place policies and programs which help maintain the ability of American agriculture to compete effectively in a global marketplace still characterized by subsidized foreign competition.

This is especially true under the new Federal Agriculture Improvement and Reform Act of 1996 (FAIR Act), which resulted in the most sweeping reforms in farm policy in over 60 years. While achieving significant budget savings, it reduces income support to producers over 7 years; eliminates acreage reduction programs; and provides increased planting flexibility. More than ever, farm income and the economic well-being of American agriculture are now dependent on continued access to foreign markets and maintaining and strengthening U.S. agricultural exports.

Accordingly, we strongly urge that USDA's export programs be fully funded and aggressively implemented. This includes maintaining funding for USDA's Market Access Program (MAP) at \$90 million as recommended in the President's fiscal year 1998 budget; providing \$30 million for the Foreign Market Development (FMD) Co-operator Program (with additional funds necessary to meet forward funding requirements for six months); and ensuring adequate funding for USDA's Foreign Agricultural Service (FAS) to help meet critical export goals and objectives. Such action is essential to America's overall trade strategy and economic interest.

It also has strong public support. A 1996 national election day poll by Penn + Schoen Associates, Inc., showed 75 percent of all Americans surveyed support such policies and programs, including USDA's Market Access Program, to promote U.S. agricultural exports, meet subsidized foreign competition and protect American jobs.

Agriculture is our nation's most export-dependent industry with exports accounting for one-third of U.S. production. In 1996, U.S. agricultural exports reached a record high of nearly \$60 billion, strengthening farm income, generating billions more in related economic activity, broadening the tax base and providing jobs for over one million Americans.

U.S. agricultural exports this past year also led to a record agricultural trade surplus of approximately \$30 billion. Without such exports, our nation's trade deficit would have been even worse.

American agriculture and American workers, however, continue to be threatened by subsidized foreign competition. Recent trade agreements, including NAFTA and the Uruguay Round Agreement on GATT, did not eliminate the use of export subsidies or other forms of export assistance. The European Union (EU), which maintains a huge advantage over the U.S. in terms of export subsidies, has recently announced a major new initiative to promote EU exports of meat, dairy, fruit, vegetables and wine into Japan—a significant U.S. market.

U.S. agricultural exports to Japan last year amounted to nearly \$12 billion, accounting for 20 percent of total U.S. agricultural exports. As many as 200,000 American jobs depend on continued exports to Japan. Clearly, any loss with regard to the Japanese market would have an adverse impact on American agriculture and American workers.

This is but one example of the competition facing American agriculture. Other countries are pursuing similar strategies. Again, this underscores the importance of USDA's export programs, including the Market Access Program (MAP) and FMD Co-operator Program. American agriculture is the most competitive industry in the world, but it can not and should not be expected to compete alone against the treasuries of foreign governments.

Funding for USDA's Market Access Program (MAP) has already been reduced by two-thirds from its original authorized level. It now represents only a fraction of what our competitors are spending. To further reduce or eliminate funding for MAP in the face of increasing subsidized foreign competition would put U.S. agriculture at a substantial competitive disadvantage.

Further, it is important to note, USDA's Market Access Program has been substantially reformed. The FAIR Act, for example, made permanent the reforms con-

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tained in previous appropriations bills. In addition to requiring that the program continues to be administered on a cost-share basis, the Act specifically targets direct assistance to small businesses, farmer cooperatives and trade associations; requires that funds be used only to promote American grown and produced agricultural commodities and related products; prohibits assistance to foreign firms relating to foreign products; maintains ongoing review and certification of use of funds; and provides for program graduation.

By any measure, USDA's Market Access Program has been a tremendous success and extremely cost-effective. It demonstrates what can be accomplished as a result of a true public-private partnership. Since the program began, U.S. agricultural exports have more than doubled and value-added exports have tripled. The number of jobs which depend on U.S. agricultural exports has also more than doubled—making it one of the most successful job-creating programs ever established.

For all these reasons, we again urge that USDA's export programs be fully funded and aggressively implemented. As a nation, we can work to export our products. Or, we can export our jobs. USDA's export programs are a key part of an overall trade strategy that is pro-growth, pro-trade and pro-job.

PREPARED STATEMENT OF ELDON HOUT, CHAIRMAN, COASTAL STATES ORGANIZATION

On behalf of the Coastal States Organization (CSO), I thank you for the opportunity to provide you with our views on fiscal year 1998 appropriations for agricultural programs. We are specifically referring to several conservation provisions enacted through the 1996 Farm Bill. We submit this letter on behalf of the Coastal States Organization, and respectfully request that it be entered into the record.

Since 1970, the Coastal States Organization has served as the coastal Governors' official representative for ocean, coastal and Great Lakes affairs of the United States. Delegates to CSO are appointed by the Governors from each of the thirty-five States, Commonwealths and Territories bordering the Atlantic and Pacific Oceans, the Gulf of Mexico, and the Great Lakes.

The coastal zone is perhaps the most intensively utilized area of our country. In addition to traditional uses such as recreation, fisheries, and shipping, the coastal zone is home to more than half the nation's population, as well as substantial agricultural interests. The coastal zone is also a fragile ecosystem that must be managed carefully in order to ensure its viability for future generations. The intertwining of agriculture and conservation programs is one step forward in that process.

Productive and sustainable agriculture is an integral component of the coastal zone. State coastal management programs have been familiar with the costs and benefits of coastal agriculture for many years. Although the States have traditionally taken the lead in agricultural conservation measures, the Federal government's role in providing monetary support and technical assistance is invaluable. To this end, the Coastal States Organization respectfully requests funding for the following programs:

Farmland protection program.—The Coastal States Organization supports the Administration's request, and urges Congress to fully fund the Farmland Protection Program at \$18 million for fiscal year 1998. This program seeks to conserve prime farmland by limiting non-agricultural uses of the land. These funds will specifically be used to leverage State and local government funds to purchase conservation easements. By limiting coastal farmland to agricultural use, development and increasing population pressures on particularly fragile coastal areas can be relieved. Coastal agriculture provides visitors to the coast with uncluttered landscapes and scenic views, and rural communities with an economic base necessary for their survival. Many of the crops grown along the coast are produced in few, if any, other areas. In all cases, these protection programs are voluntary.

Wildlife habitat incentives program.—The Coastal States Organization supports the Administration's request of \$30 million, of which \$22.5 million is directed to financial assistance, and \$7.5 million in technical assistance. This program, also of great benefit to the coastal states, seeks to encourage resource conservation on private agricultural lands. WHIP provides funds to the States, which can in turn encourage farmers to enhance wildlife habitat using monetary incentives.

Wetlands reserve program.—This program, designed to restore and protect wetlands, is integral to protecting water quality. CSO therefore supports the Administration's request of \$163.597 million.

Conservation reserve program.—CSO supports the Administration's request of \$1.926 billion for fiscal year 1998. This program conserves and improves soil and water resources of eligible farmland primarily by reducing erosion from highly erodible and marginal croplands. Special priority is given to watersheds adversely af-

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ected by agricultural activities, in addition to certain targeted coastal watersheds (Chesapeake Bay Region, Great Lakes Region, and the Long Island Sound Region).

Environmental quality incentives program.—CSO supports the Administration's request of level funding, \$200 million, for EQIP. This program provides financial, technical and education assistance to farmers and ranchers who face serious threats to soil and water. EQIP offers five to ten-year contracts that provide incentive payments and cost-sharing for conservation practices, such as nutrient management, manure management, and wildlife management.

CSO greatly appreciates this opportunity to submit our recommendations to the Subcommittee, and stands ready to assist you in any way we can. Thank you for your consideration.

PREPARED STATEMENT OF JACK A. BARNETT, EXECUTIVE DIRECTOR, COLORADO RIVER BASIN SALINITY CONTROL FORUM

With the enactment of legislation that placed, Colorado River Basin Salinity Control Forum With the enactment of legislation that placed the Colorado River salinity control program's funding in the new Environmental Quality Incentives Program (EQIP), the funds are obtained through the Commodities Credit Corporation. We realize that this no longer places the funding of the program in the discretionary category that is the focus of your subcommittee's deliberations. However, we would appreciate your considering this letter as a part of the formal record of testimony as allowed by the Agriculture, Rural Development, and Related Agencies Subcommittee. You have been a much appreciated supporter of the Colorado River salinity control program and we take this opportunity as your subcommittee is receiving testimony to advise you of the funding status and the funding needs of this program.

The Colorado River Basin Salinity Control Forum has met and concluded that approximately \$10 million is needed to improve on-farm practices in the Upper Basin states each year if the water quality standards on the Colorado River are to be met. The Basin states are in a position to take from Basin funds a 30 percent up-front cost sharing to match EQIP dollars. It is anticipated that farmers will also contribute 30 percent. This would bring the total non-Federal contribution to the program to over 50 percent. We are currently attempting to convince decision makers within the Department of Agriculture that this very large cost sharing should result in needed Federal EQIP dollars being designated for Colorado River salinity control.

To date, we have not been as successful with respect to the arguments concerning the merits of the program as we would desire. The issues focus around the fact that this is a regional program that appears to be a prime candidate to be designated as a national priority area as provided for by the Congress. The Department has not yet determined how to react to the Congressional directive of establishing national priorities.

We would very much appreciate your vigilance as Chairman of the Subcommittee in assuring that adequate funds are made available to the salinity control program so that water quality standards on the river system can be met. We would also appreciate your alerting us to issues that develop. We plan to monitor the implementation of the EQIP program and try to influence administration decisions yet to be made. We will keep you apprised of our progress.

PREPARED STATEMENT OF SUSAN G. SCHRAM, PH.D., FOOD AND AGRICULTURE PROGRAM COORDINATOR, DEPUTY DIRECTOR, WASHINGTON OPERATIONS, CONSORTIUM FOR INTERNATIONAL EARTH SCIENCE INFORMATION NETWORK [CIESIN]

Mr. Chairman, thank you for the opportunity to submit testimony to the committee. I would like to thank you and the Subcommittee for your support for The USDA/CIESIN Global Change Data Assessment and Integration Project, funded through the Agricultural Research Service (ARS). I am pleased to be able to report what we have accomplished this year, and to highlight the importance of the continuation of this project.

Mr. Chairman, this has been an exciting year for the USDA/CIESIN project! As you know, our efforts are devoted to the challenge of harnessing cutting-edge information technologies to bring long-term scientific research data to bear on agriculture and natural resource decision making. To date, our program has helped address agricultural and natural resource issues in New Mexico, Michigan, Arizona, Colorado, Texas, Oregon, Alaska, Hawaii, Oklahoma, and Idaho. This year we are particularly pleased to report that our research has led to new and innovative collaboration with USDA—in the Agricultural Research Service, the Forest Service and the Natural Resource Conservation Service.

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Our project makes a unique contribution in that it provides USDA agencies with the capacity to: (1) rescue and put to use valuable long-term scientific data that taxpayers have paid millions of dollars to collect and that have been at risk of being lost; (2) provide state-of-the-art technical tools so that concerned farmers, ranchers, and citizens can visualize alternatives and participate in decision-making about the uses of our natural resources; (3) access documentation on USDA's data resources related to agriculture and the environment, and, (4) assure that USDA benefits from new developments in electronic information technology.

Mr. Chairman, the first logical step in harnessing our scientific data resources for improved use by the research community and the public is to determine the location and condition of our precious long-term scientific agricultural and natural resource data assets. We must assure that previous public investments in scientific data collection are not sacrificed due to retirement of data custodians, inadequate documentation, or existence in single, hard copy format.

To address agricultural data rescue needs, CIESIN has continued its collaboration with the Physical Sciences Lab (PSL) at New Mexico State University (NMSU). Due to continuous funding, since the inception of our project, we have been able to complete data rescue projects at the Jornada Experimental Range and the Cibola National Forest in New Mexico and at the Santa Rita Experimental Range in Arizona. This year our efforts are devoted to data rescue work at the Southern Plains Experimental Range in Woodward, Oklahoma and at the Northwest Watershed Research Center in Boise, Idaho. Following is a capsule summary of each of these projects:

- In the course of a two-year data rescue project on the Jornada Experimental Range near Las Cruces New Mexico, we digitized and visualized over 7,000 images of basal vegetation growth dated from 1915. This project preserved over 80 years of previous government investment in scientists' efforts at tedious data documentation on graph paper and converted them to computer accessible visualization now available for land management decision making;
- The Bluewater Creek Watershed Data Rescue Project in Northwestern New Mexico involved digitizing hard copy range condition survey and aerial photography data, integrating these data with existing digital data and developing tools to make it easier for scientists and researchers at both the Cibola National Forest and the Mount Taylor Ranger District to use the data;
- A project on The Santa Rita Experimental Range near Tucson Arizona was completed through a partnership with PSL, the Agricultural Research Service, the Forest Service, the academic community, Agricultural Experiment Stations, and the Extension Service. CIESIN digitized range photographs dating back to 1903 for integration with weather data, plant species composition change data, and land treatment information to gain a comprehensive picture of changes in the landscape;
- Working with ARS personnel at the Southern Plains Experimental Range in Woodward Oklahoma, this year's data rescue efforts are devoted to rescuing hard copy forage density and animal weight data associated with a twenty year grazing intensity study that took place on the Southern Plains Experimental Range from 1941–1961. This period covered the dramatic swing in climate from wet to drought and back to wet in the southwest. CIESIN transcribed detailed hand written data records from yellowed journals to data entry sheets, in preparation for keying into a digital database at New Mexico State University. Ultimately these data will be formatted for inclusion in statistical software or other visualization tools; and,
- In consultation with ARS, work on an additional data rescue project at the Northwest Watershed Research Center at Boise Idaho will begin in March of this year.

Some of our most exciting project developments this year have been related to creative research employing the Active Response Geographic Information System (AR/GIS). As you know, geographic information systems incorporate complex databases and models with computer maps to enable policy makers and citizens to visualize the impact of alternative uses of natural resources and to reach consensus. We have won national recognition for our technology, due especially to the fact that it makes it possible to incorporate public input into controversial decisions about our precious land and forest resources. This year, USDA agencies which have taken advantage of the decision support capabilities of AR/GIS include:

- The Forest Service.*—The Arapaho and Roosevelt National Forests in Colorado have used AR/GIS to incorporate public input into their Five Year Plan. This year CIESIN facilitated district workshops to support final review of public comment and final update of the 1997 Management Revision Plan. Efforts focused around use of a spatial decision support system for interactive update and annotation of Forest Plan maps;

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—*The Natural Resource Conservation Service.*—Many federal agencies have generated eco-region maps for the United States, based on their own mission (soils types, vegetation cover, etc.). To support eco-system management strategy development across agencies and geographic regions, national integration is needed to define eco-region types. USDA's Natural Resources Conservation Service (NRCS) is leading a government task force to integrate critical parameters into a common framework. CIESIN is working with NRCS regional offices on software that will enable them to update their own regional eco-region definitions, in an effort that will lead to national integration;

—*The Agricultural Research Service.*—This year, CIESIN has begun to work with the ARS Great Plains System Research Unit (GPSR) in Ft. Collins, Colorado to develop a means of organizing, visualizing and presenting data generated by the Great Plains Framework for Agricultural Resource Management (GPFARM) model. CIESIN work provides GPFARM with geographic capabilities. We have provided a mechanism for farmers to keep records in a geographic format for input to GPFARM and a mechanism to visualize GPFARM output for decision making. We are excited to note that, in a recent GPFARM planning committee meeting, farm consultants advising the project emphasized that the continuing CIESIN contribution is imperative to the ultimate application of this overall ARS research project by farmers.

Also in the decision support area, through small public/private partnerships made possible by the existence of the core project, the City of Denver and the City of Scottsdale Arizona are interested in AR/GIS to facilitate decision making. We are exploring a partnership with Scottsdale that would help make data and information collected by NASA more available to the public. This project would be managed through the Stennis Space Center in Mississippi.

This year, in the area of data documentation CIESIN continued its work to expand public awareness of the rich data resources of USDA in the area of agriculture and the environment. CIESIN has developed and updated metadata about global environmental change-related data sets across the major USDA research agencies and made this information accessible to USDA and other researchers through the World Wide Web. The USDA/CIESIN World Wide Web "home page" (<http://www.ciesin.colostate.edu/USDA>), provides an integrated view of over 600 USDA global change data sets, 160 models, and 173 GIS applications with electronic connections to a full spectrum of information related to environmental change research topics. The home page now connects USDA researchers with over 450 additional sources of agriculture and natural resource data worldwide. CIESIN also serves as the official provider of agricultural data entries, formatted appropriately, for inclusion in the electronically-accessible NASA Global Change Master Directory.

Mr. Chairman, this project is an important part of the work of USDA in preserving previous public investment in scientific data collection, providing state of the art tools for sound agriculture and natural resource decision making, and making scientific data and information more readily available and more useful for the research community, for federal, state and local policy makers and taxpayers. We are grateful for the opportunity to provide Subcommittee members with an update on our activities.

PREPARED STATEMENT OF SAMUEL F. MINOR, VICE CHAIRMAN, COUNCIL FOR AGRICULTURAL RESEARCH, EXTENSION, AND TEACHING

Mr. Chairman, I am Sam Minor, a dairy farmer and retail market and restaurant operator with my wife and family just south of Pittsburgh, Pennsylvania. On this farm we milk 100+ cows, grow forage for the dairy herd and in addition grow several acres of sweet corn, pumpkins and other fresh vegetables. These products are primarily marketed through our dairy store, farm market, and on the farm restaurant which is operated by five family members and approximately 55 additional full-time and part-time employees. The customer count would indicate that in excess of 200,000 people visited our farm this past year.

In addition to working with our farm business, I have, for a number of years, had the opportunity to serve on the Boards of Directors of two farm cooperatives—PennWest Farm Credit that provides credit and financial services to 4,600 farmers in western Pennsylvania, and Agway Inc. the primary farm supply cooperative for 85,000 farmers in the 13 northeastern states.

I am here today to testify on behalf of the Council for Agricultural Research, Extension, and Teaching [CARET]. CARET is a national organization of grassroots or lay people, such as myself, that was created in 1982 by the National Association of State Universities and Land-Grant Colleges commonly referred to as NASULGC.

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Our mission as CARET is to enhance national support for and understanding of the land-grant university food and agricultural research, extension, and teaching mission and programs.

I have taken the time to talk about my personal background because of the importance of the subject that we are here to discuss—agricultural research and education. This agricultural research and education has been very important to our family, to our farm business, to the farmer members of these two cooperatives, and to the agricultural industry.

For example, prior to starting our farming operation in 1975 I had the opportunity to work for several years in the artificial breeding industry where we saw first hand the result of basic and applied research and extension work in dairy cattle genetics and semen physiology, which allows U.S. dairymen to have the highest producing most efficient dairy herds in the world today.

Then it really hit home when we started our own farming business. Although growing up on a general farm in the hills of southwestern Pennsylvania, I was not fully appreciative of the full impact of our land-grant research and extension programs until we started our own farm and retail farm business. We soon learned that research and extension was the basis of nearly every program we carried out in this business—literally everything from testing the soil and planting to selecting varieties, and harvesting all the way through to producing, processing, and selling the milk. I know that these comments are very basic. But this availability of science and technology is the very reason that, today, American agriculture is the envy of the world.

It has been the federally supported programs of research, extension, and teaching that have provided the scientific basis to allow 1.8 million U.S. farms, such as ours in southwestern Pennsylvania, to produce a record in excess of \$200 billion of food and fiber. A record \$60 billion of this went to the export market, allowing for a nearly \$30 billion positive contribution to the balance of trade. While these are numbers that are familiar to all of us they are very significant and, I believe, only touch on the opportunity for agriculture in the future.

This is an important time to talk about agricultural research and education. We are aware of the fiscal restraints and the changing role of the federal government in the conduct of our agricultural businesses. Agriculture will rely less upon the commodity support programs but will compete effectively in the worldwide marketplace. Agriculture research and the implementation of the research findings has been a major factor in preparing for this transition. As a result of these past efforts we will have an agricultural system that is even more competitive in the global economy.

These combined sectors of food and agriculture and their related industries provide almost 20 percent of the jobs in this country and account for 16 percent of our gross national product. Yet the consuming public spends just over 10 percent of their disposable income to meet their food needs. Every year we see new science and technologies such as global positioning precision farming that allows for site-specific decisions, or the new “super seed” varieties that have bred in resistance to pests and herbicides or new value added technologies that will allow us to more effectively market this great production capability in the expanding worldwide marketplace.

The federally-supported programs in cooperation with our state land-grant colleges and universities are crucial for us to retain and expand this competitive edge in this worldwide marketplace. Public agricultural research, education, and extension enables us to produce better and safer foods, find new uses for agriculture products, while minimizing the use of potentially harmful chemicals and curbing deterioration of our environment and natural resources.

Specifically we are here to request support for the fiscal year 1998 budget recommendation of the NASULGC Board on Agriculture of \$891.2 million, an increase of 6.6 percent over the current year appropriations. This request is for the federal portion of the funding for research extension, and higher education and federal administration that is in turn leveraged up to five times at the individual state and local level. While this is a large amount of money it is quite moderate when one considers this in relation to the total federal appropriation to research or even in relation to the agriculture appropriations. This is especially moderate when we consider this is just \$1 of federal monies for agricultural research, extension, and teaching per \$800 of consumers' food and fiber expenditures.

Mr. Chairman, I especially want to emphasize the importance of the request for the small increase in the amount appropriated for the base programs for research and extension. These base funds provide the infrastructure for the long term research and extension programs. These base funds represent the on-going state/federal partnership that represents a long-term commitment to U.S. agricultural re-

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search and the transfer of this research to implementation. The importance of these base fiends can not be over-emphasized.

The Council for Agricultural Research, Extension, and Teaching strongly supports the education programs at all of our schools including the 1862, 1890, and 1994 institutions which are enriched and improved through the higher education and challenge capacity building grants programs of the Cooperative State Research, Education, and Extension Service (CSREES).

Also, I would like to take just a moment to say a few words about the land-grant system as the Congress is about to begin consideration of the reauthorization of the Title VIII portion of the Farm Bill. This land-grant system is recognized internationally as a unique partnership working for people, food, agriculture, and the environment. This system has, however, recognized that as agriculture has changed so must the land-grant university system consider change. This recognition of the need for change has resulted in a very thorough reassessment or futuring process that has brought about "A Plan for Action on Agriculture and Natural Resources for The Land-Grant Universities."

This Plan for Action has six specific goals that are very closely coordinated with the similar objectives of the USDA REE Section. The achievement of these goals shall provide for:

1. An Agriculture System that Is Highly Competitive in the Global Economy.
2. A Safe and Secure Food and Fiber System.
3. Healthy Well-Nourished Populations.
4. Establish Greater Harmony Between Agriculture and the Environment
5. Economic Development and Quality of Life for Citizens and Communities.
6. Society Ready Graduates.

The land-grant university system, one of the greatest inventions ever in higher education, is today, in cooperation with its federal partner CSREES, positioned with a renewed commitment to help the U.S. food and fiber sector prepare to take advantage of the great opportunities that are ahead.

As an individual farmer and a member of the agriculture community, I am very proud of what this partnership has provided to us. At the same time, I believe that agricultural research and education must be an important part of our long-term agricultural policy. We must strengthen our financial commitment to assure that these basic programs of the land-grant system will be prepared to address the emerging needs of this food and fiber sector. We want to be prepared as the opening of global markets, the deregulation of commodity programs, the promise of scientific breakthroughs, and the complexity of environmental and food safety issues provide an unprecedented opportunity to put science and education to work in support of mankind. Thank you for this opportunity.

PREPARED STATEMENT OF THE CROP INSURANCE RESEARCH BUREAU, INC.

The Crop Insurance Research Bureau (CIRB) appreciates the opportunity to provide its comments to the Senate Committee on Agriculture, Nutrition, and Forestry on the future of the federal crop insurance program. CIRB is a national trade organization of crop insurers, whose members insure crops in nearly every state in the union and provide billions of dollars in crop hail and multiple peril crop insurance protection to American agricultural producers. CIRB membership is diverse and includes some of the smallest crop insurance providers to organizations delivering crop insurance nationwide.

CIRB's mission is to continuously improve crop insurance and supports efforts to strengthen and increase the efficiency of the crop insurance program. CIRB's member companies promote research and educational programs to increase the accuracy of crop insurance procedures. Its members work cooperatively with organizations and governmental institutions for the advancement of crop insurance as an integral part of the agricultural risk management environment. CIRB members are committed to delivering to the American farmer an efficient and effective crop insurance product and provide a valuable risk management tool to agricultural producers.

AGRICULTURE'S PRIMARY RISK MANAGEMENT TOOL

Through the Crop Insurance Reform Act of 1994 and the Federal Agricultural Improvement Act (FAIR) Act of 1996, Congress designed crop insurance to be one of the few remaining risk management tools. As farm subsidies and disaster payments are eliminated, it is critical that the federal crop insurance program be administered and funded in a way to adequately supports the American agricultural producer. Ken Ackerman, Acting Administrator of the Risk Management Agency has noted that recent public policy changes have redefined the Government's role in providing

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assistance to farmers, and “the key result has been to elevate Federal crop insurance into the principal pillar of the remaining ‘safety net’ for the American farmer.”

THE CROP INSURANCE PROGRAM HAS BEEN SHOWN TO WORK AND PROVIDES MORE PROTECTION TO FARMERS THAN EVER BEFORE

In the last two years, crop insurance policies have doubled, and over 75 percent of all insurable acreage is in the program. If delivery expenses for the program are not adequately funded, rural communities could lose \$26 billion in protection nationwide.

CIRB supports review of crop insurance program to ensure the delivery of quality crop insurance protection to America’s farmers in the most efficient and effective method possible. Member companies have proposed streamlining and simplification of insurance procedures, and have taken efforts to increase the accuracy of insurance procedures.

Congress, recognizing the “important role that private industry plays in delivering crop insurance,” directed the General Accounting Office (GAO) and the Federal Crop Insurance Corporation (FCIC) in the Federal Crop Insurance Reform Act of 1994, to jointly evaluate the financial agreements between FCIC and insurance providers for delivering crop insurance to producers. The law also ordered review of the FCIC directive toward simplification of delivery procedures. While CIRB commends GAO’s efforts toward this end, we conclude that the recommendations and policy announcements made in the report do not adequately reflect the crop insurance reimbursement process, and do not serve to strengthen this most crucial risk management tool. (CIRB members’ views are expressed and incorporated in the Joint Crop Industry Comments on Draft GAO Report submitted on behalf of the collective crop insurance industry.)

There are several issues which CIRB member companies believe were not appropriately addressed in the GAO study and therefore do not form the necessary basis for which GAO bases its conclusions and recommendation. These issues include:

—*The Report is inherently flawed and fails to comply with congressional mandate*—GAO presented insufficient and unrepresentational evidence to support the policy recommendations made in the study. The report did not consider the overall program performance and the larger picture of highly successful program delivery. GAO failed to comply with the congressional mandate of Section 118 of the Federal Crop Insurance Reform Act of 1994. (Public Law 103–354) to:

“determine the quality, cost, and efficiencies of providing the benefits of multiple peril crop insurance to producers of agricultural commodities”.

—*Value to producer and taxpayer*.—The GAO study fails to recognize the value to the agricultural producer in the current partnership between government and private companies in the delivery of crop insurance. The current multiple peril crop insurance (MPCI) program is highly effective and cost efficient method of risk management placing farmers in a position to share in the costs and risks of production. Public agricultural disaster assistance programs of the past strained the federal budget far beyond the cost of the current private-public crop insurance partnership. Prior to the crop insurance program, the federal government spent more than twice as much, or \$4 billion annually on farm disaster payments. The average cost of the crop insurance program is less than half of this amount. We can not afford to loose this highly efficient program both to taxpayers and the agricultural community.

—*Time period of study unrepresentative*.—The years of 1994–1995, upon which GAO bases its conclusions is not an adequate or representational time period. In those two years companies had significantly lower adjustment expenses due to low claims because of extraordinarily good weather. Nor does this narrow time period adequately reflect the significant fluctuation in operating expenses that may occur from year to year due to natural weather forces and other variables.

These significant fluctuations have direct impact on operating expenses, and companies may pay out significantly higher indemnities in a poor crop year. In fact, over the eight year period from 1988 to 1995, companies operated at a cumulative expense deficit. This is the very nature of crop insurance.

—*Failure to comply with simplification mandated by law*.—FCIC fails to implement its congressional mandate in the 1994 Federal Crop Insurance Reform Act to simplify the administrative burden placed on companies to a level “commensurate with scheduled reductions in reimbursement rates”. Under the law, FCIC was directed to “reduce paperwork to private insurers, and adopt new pro-

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cedures to reduce the cost of each crop insurance policy to companies to targeted percentage point". The GAO report does not meet its statutory mandate to include in the report a quantification of simplification measures to meet the level designated by law. Furthermore, even GAO's and RMA's estimates, stated below, indicate that RMA fell short of meeting its Congressional mandate of regulatory reduction.

The Risk Management Agency's April 17 Report to Congress "Simplification Process" states:

"The Reduction in the Administrative cost reimbursement rates mandated under section 508 (k)(4) is 3.5 percent; from 31 percent in 1994 to 27.5 percent in 1999. Neither RMA nor the General Accounting Office (GAO) has been able to quantify the savings generated by the suggestions implemented and those in progress. However, within RMA and GAO, the informal consensus of opinion is that savings generated by those suggestions is from 1.5 to 2.5 percent."

This level falls below that dictated by law.

Furthermore, according to the language of the 1994 Act authorizing an evaluation of the crop insurance program, (Public Law 103-354 Sec. 118, Crop Insurance Provider Evaluation), GAO was charged with including an evaluation of "the cost per policy of complying with the requirements, regulations, procedures and processes of the Federal Crop Insurance Act". (7 U.S.C. 101 et seq.) GAO does not include such evaluation of regulatory costs as mandated by law. Congress's intent was made explicit on the matter of regulatory simplification, in the Statement of Rep. Barrett, Cong. Record. 149, August 5, 1994, p. H6999:

"My amendment, which is incorporated in the bill before us, directs the Federal Crop Insurance Corporation to reduce the amount of paperwork burden to private insurance companies, and lower the cost of each policy held by farmers. Further, the corporation after reporting to Congress, must adopt new procedures to reduce the cost of each crop insurance policy by a targeted percentage. Not only will these provisions allow the private sector to more efficiently deliver crop insurance, but the excess administrative costs of the Federal Crop Insurance Corporation will be reduced."

Most importantly, FCIC has not taken measures as mandated by Congress to reduce the regulatory burden placed on private companies in complying with the law. Simplification measures asserted by FCIC do reduce expenses to companies, and in many instances, serve to increase companies cost by shifting the administrative burden from FCIC to the private sector. For example FCIC has shifted the burden of acreage determination to insurance companies while at the same time reducing administrative reimbursements.

FCIC proposals as listed in the GAO report do not substantially streamline the administrative process, nor do they contribute to additional cost savings toward the companies, as specified by law.

—*GAO called for a reimbursement rate similar to the already scheduled 1998 rate. Then cuts an additional 3 percent based on crop price speculation.*—According to the report, "GAO's review shows the appropriate reimbursement rate to be at about 27 percent of premium" (GAO: Report to Congress, GAO/RCED-97-70, p.10). Under current law, the reimbursement rate is scheduled to drop to a rate of 28 percent in 1998, rate very similar to GAO's recommended rate. GAO then recommends cutting an additional 3 percentage points, to a level of 24.5 percent, based on speculation that crop prices will remain at the high levels experienced in 1996.

Speculation on crop prices is not an appropriate justification for such a dramatic decrease in administrative reimbursements and not a suitable basis for determining crop insurance funding levels. Crop prices continue to be volatile, and prices have already dropped dramatically in the last year. According to RMA testimony, no similar mechanism has been proposed to compensate companies should crop prices drop.

Furthermore, compensation paid to agents represents about 45-55 percent of premium, or about 16 percent of the 28 percent reimbursement rate. So GAO's modifications based on crop fluctuations should only be made of the remaining 11 percent of the reimbursement rate, and not on the entire 28 percent reimbursement rate level.

—*GAO's recommended funding rate jeopardizes service to farmers.*—The reduced reimbursement rate called for by GAO does not provide a realistic means of funding and places the future of the Federal Crop Insurance Program in peril. Farmers could lose this most critical risk management tool. Current regulations

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state that if Congress does not appropriate funds to delivery the program, an existing policies terminate automatically without obligation.

(Sec. 457.9 Appropriations Contingency. Notwithstanding the cancellation date stated in the policy, if there are insufficient funds appropriated by the Congress to deliver the crop insurance program, the policy will automatically terminate without liability. (7 CFR Sec. 457.9)

One must remember that crop insurance stands as the only remaining safety net against crop losses as all previous crop disaster programs have been repealed. It is clear, if crop insurance funding is not sufficient, there will be no program, and no safety net for farmers.

—*Congressionally scheduled funding reductions have already taken place.*—Scheduled Reductions in delivery funds for this program have taken place, and continue to do so. In 1991, the reimbursement to companies was dropped to 34 percent of premium; 33 percent in 1992; 32.5 in 1993; 31 percent in 1994–6. Under the Crop Insurance Reform Act of 1994, Congress scheduled rates to drop to 29 percent in 1997 and to decrease to 28 percent in 1998 and 27.5 percent in 1999. The industry has made their crop insurance delivery plans based on Congress's word in the statute.

The GAO study would go beyond these Congressional scheduled reductions in law to a rate of 24.5 percent. A reduction that deep would threaten the viability of the entire program's delivery system and significantly weaken the safety net. In 1994, the Secretary of Agriculture opposed much less drastic cuts in reimbursement rates:

“To mandate that the reimbursement rate on renewals be limited to 28 percent of premium or a lower level, could impose serious burdens, particularly on smaller companies.” Letter for the Secretary of Agriculture, 1994 U.S. Code of Congressional and Administrative News, Vol. 5, p.2544.

—*Quality and efficient service.*—Congress directed GAO in the first line of the Authoring Act to study to evaluate the “quality and efficiencies” of providing multiple peril crop insurance. The GAO report is absent of any such analysis. The report fails to recognize the nature of the crop insurance product that the private sector has been asked to deliver in partnership with the federal government. The sales and marketing of this type insurance requires substantial knowledge of the product and considerable time and effort in providing and servicing the product to the insured. Significant time and costs are involved in tailoring the product to meet the specific needs of the agricultural producers. Service provided to agricultural producers by private sector delivery is much higher and more responsive to the needs of farmers. Private companies average only 30 days to get refund checks to producers, while it takes USDA an average of 160 days, or six months to satisfy farm claims.

—*Success of private sector in crop insurance delivery.*—The industry has had tremendous success in recent years in developing products providing a wide range of coverage, beyond a one option/low coverage catastrophic policy that the federal government offer. Crop insurance coverage has doubled in the past two years, and over 75 percent of all insurable acreage is currently insured. Attaining this goal of providing a superior and critical risk management tool to farmers came only after considerable commitment by the industry.

To assure farmers a quality program, companies must attract agents to participate in the federal program, which requires continuous training, familiarity and compliance with an increasingly complex program. Companies invest substantial time and resources in the education and motivation of agents in order to provide a quality product that works.

The report fails to acknowledge the service commitment required following policy sales through the acreage reporting and loss adjustment process. This post sales process in crop insurance is a critical and resource consuming activity including, field inspection, compliance reviews, acreage reporting, and maintenance of yield histories. This investment of the industries' time and resources was not taken into account in arriving at an appropriate reimbursement expenses level.

An analysis of sales and service process indicates that the work required to sell or renew crop policies is considerably more intense than that of the typical property/casualty sales process.¹ The process chart attached shows significant paper flow between farmer, agent and insurer, and these processes occur several times a season

¹Price Waterhouse, “Federal Crop Insurance Profitability and Effectiveness Analysis,” April 1997, p. 27.

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before the policy is delivered. In addition, considerable time is spent in the field adjusting policies, requiring extensive training.

Despite the higher level of work effort that is involved in delivering crop insurance, comparative statistics show that the average commission for this line is lower than most of the property/casualty lines.

—*Expense costs comparison.*—Even GAO’s analysis indicates that Multiple peril companies consistently showed lower total expense ratios than the Property/Casualty industry for the 1995 to 1995 period.² Where comparisons can be drawn with other delivery systems, private sector crop insurance is less costly. In addition, expenses have been reduced over the eight year period.

—*Companies have sustained considerable losses.*—Over the eight year period from 1988–1995, participating companies operated at a cumulative deficit with respect to expenses reimbursement (total reimbursement less than total expenses).³ In years such as 1988 and 1993, due to natural disasters, the industry sustained considerable losses and paid out far greater amounts than it received. Gains must be built up in favorable years to compensate for large loss years.

—*GAO excluded expenses are reasonable related to crop insurance delivery.*—GAO identified the following specific expenses to as disallowed for reimbursement purposes: acquisition costs of other companies (28 percent); payment of bonuses to employees (26 percent), reinsurance costs (25 percent); management fees paid to parent companies (11 percent); state income taxes (4 percent); write-off of bad debt expenses (6 percent). We believe that a strong case can be made for including all of the identified expenses categories, as they arise in the normal course of doing business with the exception of lobbying expenses (1 percent).

Many of these expenses pertain to the acquisition of assets (tangible, intangible, and human resource) that are necessary to the operation of the company’s insurance business or that will produce future efficiencies in operation. The payment of bonuses to employees is part of the normal compensation package for many companies. The bonuses excluded by GAO amount to less than 3 percent of the total expenses incurred by the three out of the nine total companies reporting.

In respect to Reinsurance, many smaller companies require commercial reinsurance to maintain underwriting capacity. It is therefore appropriate to include the net cost of commercial reinsurance premiums, minus claims recovered from the insurer, as a program cost. Management fees paid to parent companies include payments for services such as computer facilities, human resource management, etc. for MPC I subsidiaries because it is more cost effective to provide centralized processing of these services than to reallocate their costs to the operating units.

The bad debt expense is a necessary cost for MPC I business. The instructions to the FCIC expenses exhibit specifically include fees and expenses for collecting balances as an appropriate expense item. Therefore, related bad debt associated with the collection efforts, would appear to be a appropriate expense of the program. The GAO report excludes state income taxes. Income tax, whether federal, state, or local are expenses of operating in the crop insurance business. Included within the FCIC guidelines is a line item for taxes, licenses and fees (p.18).

—*RMA lacked guidelines on administrative expenses.*—FCIC did not respond to industry’s continued requests for official guidelines on FCIC approved reimbursement expenses.

—*Company’s gains kept in taxable, non-interest bearing government reserve.*—While GAO asserts that crop insurance companies experienced significant gain in recent years, (based only on the two very favorable crop years of 1994 and 1995), all gains over 15 percent are inaccessible to companies and placed in a government “reserve account”. Companies while not privy to the gains held in reserve for a three year period, are liable for taxes and are not accorded interest on the funds.

—*Lack of opportunity for industry participation.*—Congress envisioned Private sector crop insurance companies and the federal government to works as partners in crop insurance delivery. However, companies participation in crop insurance decisions has been very limited by federal regulators.

The GAO study took place over a two year time period, at which time industry had little opportunity to participate, and was given an extremely limited time frame in which to respond to this report. In addition, on major decisions regarding the Standard Reinsurance Agreement (SRA), and other issues such as regulatory simplification, industry’s comments have not be seriously considered. We encourage open communication and participation by all parties.

² Ibid, p. 16.

³ Ibid, p. 32.

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In conclusion, CIRB appreciates the opportunity to review and provide our comments to the Committee as they review the future of the federal crop insurance program. In keeping with our organization's mission to continuously improve crop insurance we respectively make the fundamental recommendation that GAO reconsider the narrow nature of its analysis in its study and further review the fundamentals of insurance and reevaluate its analysis and recommendations based on that review.

We request the report to consider the quality, efficiencies, and timing of the service of the private sector in providing benefits to agricultural producers. We further recommend that analysis be expanded to include a more normal loss year, and conduct a much more thorough study on the volatility of crop prices before recommending such a significant reduction in the premium subsidy for operating and administrative expenses.

Most importantly, we ask that analysis be guided by the over reaching goal of the crop insurance program—to provide risk management protection, via crop insurance, to the American farmer. Agricultural producers and taxpayers have reaped great benefits from private industry involvement in the crop insurance program. We believe that the performance record over the last years speaks for itself, as crop insurance coverage in our nation has doubled. We believe that the best, most cost effective, and most efficient means for delivering federally subsidized crop insurance is through private insurance. Therefore the performance of this program should be closely examined, and highly regarded as the best way to provide an effective means of risk management to the American farmer.

PREPARED STATEMENT OF JOHN W. SUTTIE, PH.D., PRESIDENT, FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY [FASEB]

Mr. Chairman, Mr. Bumpers, Members of the Subcommittee: I am John Suttie, the current President of the Federation of American Societies for Experimental Biology (FASEB). I am also a Professor of Biochemistry at the University of Wisconsin, Madison, as well as a Professor and Chair of the Department of Nutrition Sciences at that institution. It is as President of the Federation that I submit this statement in support of the life sciences research budget of the Department of Agriculture. FASEB considers, as we believe this committee does, USDA-supported research conducted at universities throughout the United States to be essential for ensuring an affordable, abundant, and wholesome supply of food and fiber for our citizens. It also promotes the competitive position of U.S. agriculture in the global marketplace.

For those of the committee not familiar with it, FASEB is a coalition of 14 societies with a combined membership of more than 45,000 individual scientists who work in life sciences research at all the major universities and in corporate research laboratories. The Federation was created in 1913 to provide an organization which could represent the views of the basic research scientist in the science policy debates of its day. More than 80 years later, this still remains the fundamental purpose for the existence of our Federation. FASEB, through its consensus-based policy development process provides a vehicle for the basic scientist to be heard in public policy deliberations which affect biomedical and life science research in this country. We believe we bring a unique perspective to the difficult policy questions which this Subcommittee must face in allocating scarce federal resources.

In that context, we come to you not only as advocates for life sciences research, but also as experts on the approaches which we, as bench scientists, believe will lead to the most productive science in the public interest. These approaches are grounded foremost in the principle that a competitive system for allocating government research funds is the most effective and efficient mechanism for getting the results we all seek to better the health of the American people.

It is for this reason that FASEB recommends to the Committee an increase in funding for the National Research Initiative Competitive Grants Program at the Department of Agriculture from \$94 million to \$138 million. This amount, similar to that which the President presented to Congress in February, reflects our view that the competitive grants program will lead to a more balanced and productive system of research. The National Research Initiative is an area that Science magazine recently characterized as "chronically underfunded".

NRI COMPETITIVE GRANTS PROGRAM [NRICGP]

Let me describe for the Committee briefly the Department's current competitive grants program and give some examples of the quality of research which is already being carried out. Officially referred to as the National Research Initiative Competitive Grants Program (NRICGP), this program funds extramural research projects at

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public and private universities and colleges. Research proposals are merit reviewed and those attaining the best scores on a rigorous system of peer review are funded. Projects have a schedule for completion, and both yearly progress reports and final reports are required. At its inception in 1989, the NRICGP was authorized to reach a total budget of \$500 million. However, only \$94.2 million was appropriated in fiscal year 1997 for the program, which amounts to only about 5 percent of the Department's total budget for Research, Education, and Extension. We believe that this action was short-sighted.

Recent accomplishments of NRICGP-funded research are relevant to broad areas of agricultural and social concerns and provide rich evidence in support of our request that this program be expanded. Let me present just three examples out of many:

Plant pathology and healthier corn.—Disease resistance in plants is often controlled by genes that recognize the presence of a pathogen and then trigger a defense response. Unfortunately, over time the pathogen can change until it is unrecognized, at which time it is no longer attacked by the plant's defense gene. Recognizing the importance of this finding, researchers have identified a cluster of genes in corn that control resistance to the fungus causing common rust disease; they have found that the defense genes can be reordered so as to maintain at least a partial defense against changing fungus populations. This research is now being applied to create corn varieties with resistance to the common rust fungus.

Animal health.—Porcine reproductive and respiratory syndrome is a viral disease of pigs cited by the National Pork Producers Council as its most important animal health problem, and a cause of substantial economic loss. NRICGP-supported research has identified and characterized the causative agent of this disease and, subsequently, contributed to the development of the first vaccine to protect against it. The vaccine is now being used by swine producers throughout the United States.

Improving human nutrition.—Human nutrition, traditionally a key program in USDA, has become more complex as we have established connections among nutrient intake, nutritional status, and human health. For example, we know from investigations of their interactions that inadequate nutritional status of folate, vitamin B12, and/or vitamin B6 is a major factor associated with mild elevation of plasma homocysteine concentration, which in turn is associated with increased risk for several kinds of vascular disease. This is but one example of the need to improve our understanding of the metabolic functions and the interactions of essential nutrients.

Mr. Chairman, we believe these examples are typical of the quality of the science you can expect from an expanded competitive research program at the Department of Agriculture. It is for this reason that the Federation urges this Subcommittee to increase the funding for the National Research Initiative to \$138 million for fiscal year 1998.

FASEB has previously distributed to the Subcommittee other recommendations of the Federation in several areas under your jurisdiction. They are included in the report of our fiscal year 1998 Federal Funding Consensus Conference, which has been circulated to Committee members. In the interest of space, I will not cover all of these in my statement. However, I would like to touch briefly on two other issues.

ANIMAL WELFARE ACT ENFORCEMENT

The first issue I wish to bring to the Subcommittee's attention is our concern regarding the enforcement of the Animal Welfare Act (AWA), which is vitally important to the conduct of biomedical research across the nation. Congress passed the AWA, and its subsequent amendments, to protect family pets without imposing unjustified restrictions on medical research. FASEB urges USDA to enforce the AWA provisions with respect to random-source animal dealers in order to fulfill the intent of Congress and uphold the public's continued confidence about their pets' safety.

TRAINING OF AGRICULTURAL RESEARCHERS AND SCIENTISTS

The second issue has to do with support for the training of agricultural scientists. USDA supports critically needed stipends for graduate students through its National Needs Initiatives (NNI). The NNI is the only national research training program in agriculture, and its investment in human capital is essential for recruiting, preparing, and training the next generation of scientists. FASEB recommends that the decrease in NNI funding be reversed, and that this initiative be increased from \$4 million to \$5 million in fiscal year 1998.

Mr. Chairman, that concludes my statement. Thank you for this opportunity to bring FASEB's recommendations to your attention.

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PREPARED STATEMENT OF THE CITY OF GAINESVILLE, FL

Mr. Chairman: On behalf of the City of Gainesville, Florida I appreciate the opportunity to present this written testimony to you today. The City of Gainesville is seeking federal funds in the fiscal year 1998 Agriculture Appropriations bill, in order to assist our efforts to protect the Floridian aquifer from stormwater runoff. In particular, we are hopeful that the Subcommittee will provide the City with \$2 million through the Fund for Rural America.

In Gainesville, the Sweetwater Branch basin contains approximately 1,710 acres and is located in the southeast central portion of the City. The outfall from this basin discharges into Paynes Prairie, a state owned preserve and park system, which eventually flows into the Alachua Sink, a natural sink hole that drains directly into the Floridian Aquifer. This Aquifer provides the majority of drinking water to Florida's residents and has a direct impact on Florida Everglades.

The Sweetwater Branch drainage basin contains urban, commercial, industrial, and residential area stormwater runoff. Because the branch runs through some of the oldest portions of Gainesville, most stormwater runoff is directly discharged into the Branch with very little flooding attenuation or pollution loading reduction. The runoff has the potential to affect threatened and endangered wildlife such as the Bald Eagle, the Woodstork, the Florida Sandhill Crane, and the Southeastern American Kestrel. In addition, many domestic water wells are used to obtain water from surficial and intermediate aquifers in the area. In summary, the situation has created a concern amongst environmentalists, business leaders, and concerned citizens throughout the region that Paynes Prairie and the Floridian aquifer are being compromised.

With this in mind, the City of Gainesville, Alachua County, St. Johns River Water Management District, Florida Department of Environmental Protection and local citizens are all seeking a comprehensive ecosystem management solution to the problem of stormwater runoff from downtown entering Sweetwater Branch, Paynes Prairie, and the Alachua Sink. The project devised by these groups would reduce or eliminate the sediment, debris, nutrients and general pollutants currently being discharged. Current projections are that the project would consist of the following three components:

- the purchase of undeveloped property in the vicinity of State Road 331 and Sweetwater Branch;
- the construction of maintainable sediment and debris removal systems; and
- the construction of maintainable nutrient removal systems.

An in-depth engineering analysis of the creek system, property topography, associated wetlands, and other pertinent factors is needed to determine the optimum and appropriate scope of property purchase and facilities construction. The City is prepared to pay some of the cost for this analysis, but we are simply unable to bear the entire burden. As a result, we request that the Subcommittee appropriate \$2 million to assist our efforts. Once the project construction is complete, Gainesville Stormwater Management Utility, a public utility, would provide the required annual maintenance for the facility and no federal maintenance funds would be needed.

This is a critical and much needed project for the City of Gainesville, as well as the entire State of Florida, and we respectfully ask the Subcommittee for its consideration of the Sweetwater Branch/Paynes Prairie Stormwater Project.

PREPARED STATEMENT OF DR. RAYMOND E. BYE, JR., ASSOCIATE VICE PRESIDENT FOR RESEARCH, FLORIDA STATE UNIVERSITY

Mr. Chairman, thank you and the Members of the Subcommittee for this opportunity to present testimony before your Subcommittee. I would like to take a moment to acquaint you with Florida State University. Located in the state capitol of Tallahassee, we have been a university since 1950, prior to that, we had a long and proud history as a seminary, a college, and a women's college. While widely-known for our athletics teams, we have a rapidly-emerging reputation as one of the Nation's top public universities. Having been designated as a Carnegie Research I University several years ago, Florida State University currently exceeds \$100 million per year in research expenditures. With no medical school, few public institutions can boast of that kind of success. We are strong in both the sciences and the arts. We have high quality students; we rank in the top 25 among U.S. colleges and universities in attracting National Merit Scholars. Our scientist and engineers do excellent research, and they work closely with industry to commercialize those results. Florida State ranks seventh this year among all U.S. universities in royalties collected from its patents and licenses. In short, Florida State University is an exciting and rapidly-changing institution.

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Mr. Chairman, let me briefly describe two projects that we are pursuing through the Fund for Rural America Research, Education and Extension grants program. Both projects are consistent with this Subcommittee's report language in fiscal year 1997 which noted support for a Florida State University project working with public libraries. Our first project has the practical goal of utilizing communications technologies that are interactive, multimedia, and have touch screen programs to provide user-friendly health information to the citizens of the 17 rural counties in north Florida. The information would be targeted at common medical conditions or explanations of laboratory tests or health promotion facts. The dissemination of this information would be through both public libraries and public health facilities in these 17 counties. Our partner in this project will be the Panhandle Library Access Network, Inc. (PLAN), an organization of 41 libraries located throughout the 17-county area of north Florida. Substantial on-line capabilities and trained resource personnel are available through this Network. Working with FSU's staff in social work, nursing, and child and elderly health programs, the information will be developed for wide distribution and utilization, allowing consultation for these rural populations without necessitating their travel to urban areas. Substantial in-kind matching will be provided as part of the local and state commitment.

Our second project is a collaborative effort between Florida State University's Center for Ocean-Atmospheric Prediction Studies, the University of Florida's Institute for Food, Agriculture, and Science (IFAS), and the Panhandle Library Access Network (PLAN). FSU has developed analyses that can determine and interpret for farmers the effects of seasonal climate shifts on the production of grain and fruit crops across the United States.

This new analytical approach is based upon the recently-acquired ability to forecast the warm and cold swings of El Nino in the equatorial Pacific Ocean and to ascertain the weather impact of regions and smaller areas. These climate impacts are understood, and this project will apply that understanding to localized information for farmers about wet or dry conditions. The information will be developed and interpreted by FSU, with the assistance of the University of Florida, and disseminated by IFAS's extensive network of communications to farms and cooperatives. In addition, an educational and dissemination component will be provided through the public library network of 41 libraries in seventeen north Florida counties.

An assessment of the utility of this effort will also be done to determine the value of this information on climate shifts from summer to summer or spring to spring. Published research shows an estimated \$300 million per year in mitigable savings on grain crops across the U.S.; when applied to vegetable and fruit production, the estimated savings is \$500 million annually. We feel this project can make a substantial contribution to the profitability and efficiency of the American farmer.

Mr. Chairman, these activities discussed will make important contributions to solving some key problems and concerns we face today. Your support would be appreciated, and, again, thank you for an opportunity to present these views for your consideration.

PREPARED STATEMENT OF THE FLORIDA SUGAR CANE LEAGUE

The USDA-Agricultural Research Service (ARS) operates the Sugarcane Field Station, a key agronomic research facility for the mainland U.S. cane sugar industry, at Canal Point, Florida. The Sugarcane Field Station, in cooperation with industry and the University System, is responsible for Sugarcane germplasm improvement and variety development in Florida, Louisiana and Texas through genetic research, and a well-established plant hybridization and selection program. The station has been in operation since 1928 and is widely recognized and respected throughout the world for its contributions to Sugarcane agriculture.

There is currently a strong need for additional funding at the Sugarcane Field Station to carry out new research toward the development of a higher level of agricultural sustainability for the Everglades Agricultural Area (EAA). As recommended by the President's proposed budget, an annual increase of \$1 million for ARS in Florida would enable the agency to begin much needed new research to improve sugarcane's water tolerance, reduce nutrient requirements and develop Sugarcane varieties and management practices that would allow for substantial restoration of the pre-drainage hydrological relationships of the EAA with Lake Okeechobee and other natural areas of the south Florida landscape.

The proposed research by ARS would be long term with gradual improvements expected throughout. Within ten years, the program should produce sugarcane varieties and management practices which could significantly improve the relationship of EAA agriculture to ecosystem restoration objectives. This is why research of this

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type was identified by the Federal Task Force on South Florida Ecosystem Restoration and Governor Chile's Commission for a Sustainable South Florida as an essential element of ecosystem restoration and sustainable development in south Florida.¹ This proposed research is now the central principle for incorporating the EAA into the restoration plans of the now expanded Federal, State and Tribal Task Force.

Many view efforts in the Everglades as an international model for ecosystem restoration, and far too often, modern agriculture has been depicted as conflicting with ecological restoration. In reality, agricultural and natural systems are interdependent and supportive of each other. This is clearly the case in south Florida where conceptually a sustainable EAA agriculture and a sustainable Everglades are inextricably linked. Contrary to many negative perceptions, sugarcane production in the EAA is a good example of the kind of relationship that agriculture should have within the natural system.

The growers of the EAA agree with the administration that the science proposed here will benefit all legitimate interests of Everglades restoration by working towards a more sustainable agriculture in south Florida. The resulting model would serve us well because it would concurrently sustain agriculture, the regional economy and the natural ecosystem of the area. We respectfully request your support of this important research initiative.

PREPARED STATEMENT OF R. LAWRENCE COUGHLIN, PRESIDENT, FRIENDS OF THE NATIONAL ARBORETUM

Mr. Chairman and Members of the Subcommittee, I appreciate the opportunity to submit testimony as President of Friends of the U.S. National Arboretum (FONA) in support of three specific programs at the U.S. National Arboretum.

FONA is a private, non-profit corporation dedicated to providing support for the U.S. National Arboretum. Since 1927, the U.S. National Arboretum has engaged in horticultural research and education in nursery and floral crops, the fastest growing segment of the U.S. agricultural business.

Thanks to your foresight and generosity, as well as the generosity of the private sector, the U.S. National Arboretum has introduced over 150 important new cultivars of disease resistant and ornamental plants. This year, with the support of generous contributors to FONA, the U.S. National Arboretum went on-line on the Internet in a further effort to enhance dissemination of research and horticultural information. Today, nursery and floral crops represent 11 percent of the total cash value of all U.S. agricultural products and gardening is the number one hobby and leisure activity in the U.S.

We at FONA are well aware of the fiscal constraints on the Federal government. At the same time, the U.S. National Arboretum is a tiny piece of the budget of the Agricultural Research Service (ARS). In fact the Arboretum represents less than one percent (1 percent) of the President's fiscal year 1998 budget of \$726.8 million for the ARS. In addition, the allocations of funds that FONA is seeking for the Arboretum are a small part of specific increases proposed in the President's budget.

The President's budget requests a \$4 million increase for Integrated Pest Management (IPM) research and biological control. Of this amount, we request the Committee to direct that a modest increase of \$150,000 be allocated to the Arboretum's very successful landscape IPM program—only \$150,000 of a \$4 million increase! This would match and supplement current private grant funds and allow the Arboretum to develop a landscape IPM program with significant national implications.

Second, we request the Committee to direct that \$250,000 of the \$4 million IPM/Biocontrol increase be allocated to the Arboretum's ongoing program to develop environmentally safe pesticides. Products like Rose Guard, containing neem oil, are paving the way for a new generation of "people safe" products to control harmful pests and diseases. Again, this is a small part of the specific increase requested by the President and is for the purpose of the President's requested increase.

Third, the President's budget for fiscal year 1998 requests an increase of \$2 million to expand ART germplasm collection. We request the Committee to direct that \$250,000 of this increase be allocated to expand the Arboretum's modest program of germplasm collection of trees and shrubs. This would provide potentially useful

¹The Federal Task Force identified this effort as one of three unfunded science priorities (Report of the Science sub Group, June 23, 1995 Science Priorities and Gaps: Considerations for Budget Planning) and it was a preferred alternative of the Governor's Commission (Report of the Governor's Commission for a Sustainable South Florida—A Conceptual Plan for the S&SF Project Restudy, 1996 pp. 52–53).

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genetic materials for the development of new and improved ornamental trees and floral plants.

It is of course important that these increased allocations not be done in such a way that funds are shifted from other U.S. National Arboretum priorities. Modernizing and adapting the Arboretum to the information age as well as providing new horticultural research is ongoing with both public and private funds. It is important that Federal support for U.S. agricultural research not be regarded as waning.

We would emphasize again that our request is not for unbudgeted funds or new programs. It is for a portion of budgeted funding increases for ongoing priority programs. The U.S. National Arboretum performs outstanding research as well as providing the outlet, the outreach and the showcase for U.S. agriculture.

Thank you for your stewardship of the jewel that is our National Arboretum and for your consideration of FONAs request.

PREPARED STATEMENT OF THE HEALTH INDUSTRY MANUFACTURERS ASSOCIATION

INTRODUCTION AND SUMMARY

The Health Industry Manufacturers Association (HIMA) appreciates the opportunity to present this statement on FDA's fiscal year 1998 budget. HIMA is the largest medical technology trade association in the world, representing more than 700 manufacturers of medical devices, diagnostics, and health information systems. HIMA members are intimately familiar with FDA regulation, so we welcome the opportunity to comment on the issues surrounding FDA's funding for the next fiscal year.

In our testimony, we wish to share several points with you:

- We urge this Subcommittee to continue its pressure on the FDA to modernize and improve management—particularly with respect to the agency's performance in reviewing life-saving and life-enhancing medical technologies through the PMA review process.
- We believe that FDA's medical device program can be improved without increases in appropriations, but it must be able to count on stable funding.
- We believe that, if cuts are made in FDA's budget, they must be carefully targeted. They should be focused on stopping low-priority work, and they should not threaten activities central to FDA's core mission—for example, activities dealing with product review and product safety. More broadly, what reductions need to be made should be fair and proportionate across the various program areas of the agency.
- Finally, we believe the Administration's user fee proposal for the medical device program masks dangerous cuts in FDA's budget authority that undermine the efforts of agency personnel to protect and promote public health. This point deserves special attention this year. As our testimony will outline, the Administration's medical device user fee proposal threatens innovation and endangers patient access to needed medical technologies.

In summary, we ask this Subcommittee to make sure that the "jump start" it has provided on FDA reform continues until Congress is able to give FDA the lasting legislative "tune-up" the agency needs.

FDA PERFORMANCE

At the outset, we want to point out that FDA's performance in regulating medical devices has improved over the past two years. Product review times, especially for products that come to market through the 510(k) review process, have come down, though much work remains—especially for breakthrough products reviewed through the PMA process, as we will detail in a few moments.

In addition, the agency has undertaken a number of administrative reforms in the product approval, postmarket, and enforcement areas that—even a year ago—seemed unlikely. We draw a number of lessons from these improvements.

The first lesson is that the impact of the appropriations committees of Congress is significant when it comes to reforming FDA. When we testified on the agency's fiscal year 1996 budget two years ago, we urged the appropriations committees of Congress to "jump start" FDA reform. You have done just that. We thank you. And we urge you to keep up the good work. Much of the progress we have seen during the last two years reflects administrative reforms this Subcommittee encouraged. These include: better management; better targeting of resources; better accounting practices; and better use of appropriated funds overall.

Your efforts have complemented the work of the Labor and Human Resources Committee by pushing for a clearer picture of how resources are being used at the

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agency and by pressing the agency to make budgeting and management improvements to meet statutory goals. Indeed, we believe the appropriations committees and the authorizing committees have become a unified team that is forcing the agency to modernize step-by-step—much to the betterment of patient care.

The second lesson that we draw from FDA's progress over the past two years is that the agency can clearly improve its performance without increases in appropriations. As you know, this Subcommittee has held the line on FDA's budget. For the past two years, FDA's medical device program has operated with, in effect, a flat level of funding. As a result, FDA has been forced to use the management tools at its disposal to do the job before it—not by relying on vast new funding. We believe the record shows that entrepreneurial thinking and innovative management are the commodities the agency needs and that improvements in performance are more a question of intent than of increased appropriations.

The third lesson that we draw from these initiatives and FDA's performance in the past couple of years is that the agency does not need user fees for medical devices. Indeed, this is one of the most resounding and important lessons. In virtually every year in recent memory, FDA has requested medical device user fees, claiming that they were absolutely vital to performing its duties. In 1994, FDA went so far as to predict that 510(k) review times and backlogs would steadily rise if Congress did not authorize such fees.¹ But, instead, Congress instructed the agency to use its existing resources more wisely.

The result? While review times still need improvement, the agency has cut down on 510(k) review times. We have included charts which show that average 510(k) review times have declined from a high of 216 days total time in 1994 to 145 days in 1996. Further, the backlogs of 510(k)'s in most reviewing divisions have been eliminated.

ADMINISTRATION DEVICE USER FEE PROPOSAL

But this year's user fee proposal for medical devices deserves special attention, and—in many ways—cannot be fully understood in the context of past proposals of this kind. The reason is that the Administration request is far worse than any made in the past—and could reverberate for generations to come.

The proposed device user fee program differs from previous Clinton Administration proposals in two respects: (1) It is much larger—\$45 million, in place of the approximately \$24 million program requested in fiscal years 1996 and 1997; (2) Secondly, it would not be used to enhance the agency's ability to improve device reviews—which is how user fees were presented during the past two years. Instead, it would take the place of federal appropriations—creating a kind of backdoor tax on the device industry to help reduce the federal deficit.

But perhaps most troubling is this: The Administration has structured its user fee proposal in such a way that—if Congress does not accept the “savings” it offers and chooses, instead, to reject user fees—the budget authority for FDA's medical device program would be slashed by approximately \$40 million. If that happens, the FDA's device center could lose as many as 388 full-time-equivalent employees.

The impact on public health would be devastating. By FDA's own estimates, the agency's ability to comply with the statutory limits for device review would drop in comparison to fiscal year 1996—both in PMA's and 510(k)'s. This drop in performance would occur despite the fact that FDA already falls far short of complying with the time deadlines set by Congress in both the 510(k) and PMA review tracks. What this means in real-world terms is that many patients are going to be waiting a lot longer for the treatments they need.

ADMINISTRATION'S PROPOSED BUDGET FOR FDA

In light of the potential impact of this medical device user fee proposal—and in light of the agency's performance during the past two years without user fees—we arrive at a couple of unmistakable conclusions about the Administration's fiscal year 1998 budget proposal for FDA.

First, the kind of deep cuts in FDA's budget authority contemplated by the Administration's medical device user fee proposal must not be allowed. Cutting 388 medical device staffers and allowing device review times to fall even further short of legislative mandates may help promote deficit reduction, but it certainly carries a high price tag in terms of public health. Our feeling is that FDA medical device personnel must be able to count on a reasonable and predictable budget to carry

¹U.S. House of Representatives, Committee on Energy and Commerce, Subcommittee on Health and the Environment, Hearing on H.R. 4728—The Medical Device User Fee Act of 1994, Report No. 103-139 (July 14, 1994), p. 61 and p. 142.

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out their duties. In our view, that means stable and level funding for FDA's medical device review effort during fiscal year 1998.

The second conclusion we reach in reviewing FDA's performance during the past couple of years—without medical device user fees—is that before the Subcommittee seriously considers enough user fees of any kind, we must be absolutely certain the agency is doing all it can to use its existing funds wisely and to perform fully its core duties of protecting and promoting public health. Unfortunately, FDA is not doing enough—despite the progress we noted earlier.

PROTECTING PUBLIC HEALTH

As we have said before, we believe that FDA's responsibility in protecting and promoting the public health has two parts: (1) Keeping unsafe and ineffective products off the market, and (2) ensuring that new and improved technologies reach patients in a timely manner.

While FDA is attempting to meet the first charge, many policies continue to fall far short of the second. This can be seen most clearly in FDA's performance in reviewing and approving PMA's. The charts we have enclosed show that while PMA submissions have dropped by roughly half since 1989, total average review time has skyrocketed from 348 days to 786 days in 1996. Keep in mind that the Congress has said that such products must be reviewed within 180 days—making FDA's average performance on PMA's some 400 percent more than what Congress allowed. The net effect of such delays is to deny patients access to life-saving and life-supporting technologies—clear harm to the public health.

According to one recent study, such policies are already forcing companies to introduce products overseas and are driving R&D out of the U.S. Technologies now available in this country are frequently many generations behind Europe. The primary reasons for these kinds of delays are excessive FDA policies that hinder innovation and slow product approvals. For example, FDA continues to impose clinical standards on device reviews that are clearly inappropriate for devices. FDA has substantially revised its effectiveness criteria by venturing into such fields as clinical outcomes, relative effectiveness, and cost-effectiveness. FDA seems wedded to certain postmarket and enforcement programs that are in dire need of streamlining and improvement. Although some progress has been made, more is needed.

These policies harm patients because they delay access to new products. Though FDA touts its product review performance improvement on 510(k)'s, it overlooks the fact that the length of time it takes for PMA products to move from the idea stage to final marketing and, ultimately, to the bedsides of patients is actually increasing. From an appropriations perspective, these policies also have a devastating impact because they consume FDA's scarce resources. Until such activities are substantially curtailed or reformed, we believe FDA cannot claim it has done all it can to find management efficiencies and use appropriated dollars as wisely as possible.

REFORMS NEEDED

Ultimately, we believe that lasting correction of FDA's tendency to veer away from its primary duties—such as clearing new PMA's—can be achieved only through legislative reform of the agency. Administrative reform is not enough. It is only a start. The administrative improvements we've seen can be undone as quickly as they have been put in place. To ensure they are locked-in and are not changed by a new Administration, new Commissioner, or new regulations, Congress must pass legislation to modernize the FDA and outfit the agency for the next century.

Legislative reform will ensure that FDA finally and permanently focuses on achieving all—not just some, but all—aspects of its public health mission, including seeing to it that patients receive timely access to new and improved technologies.

Legislative reform will ensure that FDA finally imposes clinical standards that are appropriate and fitting for medical devices and geared toward what is best for public health. Legislative reform will ensure that duplicative regulatory requirements worldwide are finally eliminated. Legislative reform will ensure, finally, that FDA uses appropriated dollars wisely and in a manner that truly protects and promotes public health.

FUNDING RECOMMENDATIONS

Nevertheless—while Congress continues to grapple with the elements of this modernization effort—we urge this Subcommittee to continue the excellent work it has done in past years to buttress and reinforce FDA reform. Toward that end, we offer you these specific suggestions for funding levels and report language as you consider the details of the Administration's fiscal year 1998 budget:

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Soundly reject the Administration's medical device user fee proposal and send a strong signal that deep cuts in the agency's budget authority are unacceptable

As noted above, the medical device user fee proposal should be flatly rejected because of the devastating impact on FDA's ability to meet its product review responsibilities. In addition, we urge the Subcommittee to include language in its report that expresses its concern about the impact of such a proposal on the ability of the medical device industry to innovate. User fees are nothing more than a tax on the ability of our industry to develop new products, refine existing products, and push the frontiers of medicine for patients.

Ensure level funding for the medical device program in fiscal year 1998 so that it has adequate resources to do the important job before it

Providing level funding is especially important with regard to FDA regulation of devices. According to the Administration proposal, the device program would shoulder about two-thirds of the \$67.5 million net drop in FDA budget authority from fiscal year 1997 to fiscal year 1998. This is a disproportionate cut, given the improvements that are needed in the medical device program. This is an irresponsible cut when you consider its impact on patients who will be denied timely access to life-saving and life-supporting medical products.

Ensure that any reductions in FDA funding are not made in activities central to the agency's primary mission—such as device reviews and activities to protect patient safety

In a time of austerity, FDA must do first things first—that is, those activities central to its primary mission. In the device program that means product reviews and activities to protect patient safety. In particular, FDA should be directed to improve its performance in reviewing PMA's without undercutting the progress it has made in the 510(k) area. Any reductions in funding that Congress deems necessary must be targeted on programs that veer away from the agency's core mission, or that—while perfectly appropriate—cannot be justified during periods of budget constraint. Many of FDA's educational and scientific endeavors fall into this latter category.

Press the agency to use its management tools to continue efforts to modernize

As FDA itself has shown, it has plenty of opportunity to improve product review performance. In many cases, these are simple things—communicating more clearly, acting more uniformly, not changing directions in midstream, and so on. In other cases, it involves trying a new approach or rethinking old practices. Sometimes, it means simply discontinuing lower priority work or stopping projects that do not achieve its core mission. As far back as 1993, Congress stressed that such techniques could improve FDA performance.² Since then, this Subcommittee and the authorizing Committee have sent a consistent message to the agency, Aging management reforms. We urge you to continue to do so.

Tighten the agency's performance goals to ensure that it achieves its central mission of promoting and protecting public health

We believe that the performance goals FDA has set for itself under a fully funded budget are not ambitious enough, while its goals under a partially funded budget are downright devastating. We urge the Subcommittee to make clear to the agency that such targets are unacceptable. Regardless of the level at which the Subcommittee chooses to fund the agency, we believe it can demand much better performance.

CONCLUSION

In conclusion, we think FDA can point to reasonable efforts to improve its work during the past years. We applaud them. And we applaud you. But we believe that this progress will continue only if you, once again, force the agency to work harder and smarter and if you tell the Administration clearly that proposals to impose medical device user fees—while slashing FDA's base funding—are unacceptable. By taking this approach, you will—as we said earlier—ensure that the “jump start” you provided several years ago continues until Congress is able to give FDA the lasting legislative “tune-up” it needs.

²U.S. House of Representatives, Committee on Energy and Commerce, Subcommittee on Oversight and Investigations, *Less Than The Sum Of Its Parts. Reforms Needed in the Organization, Management, and Resources of the Food and Drug Administration's Center for Devices and Radiological Health*, Committee Print 103-N (May 1993).

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510(k) device submissions

<i>Fiscal year</i>	<i>Applications submitted</i>
1989	7,022
1990	5,831
1991	5,770
1992	6,509
1993	6,288
1994	6,434
1995	6,056
1996	5,297

Source: ODE annual reports 1991–1996.

510(k) DATA—AVERAGE REVIEW TIME

	Fiscal years					
	1991	1992	1993	1994	1995	1996
FDA time	81	102	162	184	137	110
Total time	102	126	195	216	178	145

Source: ODE annual reports 1991–1996.

PMA device submissions

<i>Fiscal year</i>	<i>Applications submitted</i>
1989	84
1990	79
1991	75
1992	65
1993	40
1994	43
1995	39
1996	44

Source: ODE annual reports 1989–1996.

ORIGINAL PMA DATA—AVERAGE ELAPSED REVIEW TIME

	Fiscal years—					
	1991	1992	1993	1994	1995	1996
FDA	335	236	547	649	606	572
Total	633	310	799	823	773	786

Source: ODE annual reports 1991–1996.

PREPARED STATEMENT OF WAYNE PACHELLE, VICE PRESIDENT, GOVERNMENT AFFAIRS AND MEDIA, HUMANE SOCIETY OF THE UNITED STATES [HSUS]

SUSTAINABLE AGRICULTURE PROGRAMS

Public interest in sustainable agriculture farming systems continues to grow. The HSUS supports these cost-effective yet environment-friendly systems which also improve the welfare of animals. We join the Campaign for Sustainable Agriculture in requesting funding of the following sustainable agriculture programs.

The Sustainable Agriculture Research and Education (SARE) program is a competitive grants program that funds high-quality, farmer-involved research and education on economic, agronomic, and environmental aspects of sustainable agriculture farming systems.

SARE's professional development program (formerly known as SATDTP) funds projects to train extension, NRCS and FSA staff, and other agricultural professionals in sustainable ag concepts, research and practices.

We join the Campaign in requesting \$10.5 million for the SARE program and \$4.5 million for the Professional Development Program for fiscal year 1998.

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AGRICULTURAL TECHNOLOGY AND TRANSFER FOR RURAL AREAS (ATTRA)

The HSUS strongly supports funding for ATTRA at the level of \$1.3 million for fiscal year 1998. ATTRA handled over 22,000 cases in 1996. Since 1989, the case-load has quadrupled but has received the same level funding for years. It serves the entire nation with specialists who provide farmers and others with sustainable agriculture information, research results, and information based on practical experience. There is no other source of readily available information covering such a wide scope of sustainable agriculture topics. The funding level requested for fiscal year 1998, \$1.3 million, will allow ATTRA to continue to perform this important function.

ORGANIC FOOD PRODUCTION ACT

For the sixth year in a row, the organic industry has grown more than 20 percent in sales, with reasons for purchase ranging from environmental and health concerns to that of enhanced animal health and well-being. Adopting consistent national standards for organic products is very important, and now is a crucial time for the national organic program to begin full implementation. This program is on the verge of becoming extremely beneficial to consumers and producers alike. More staff hours are needed to manage comments on the proposed rule, to get the final rule out, enable implementation of the program and facilitate dissemination of program information. The HSUS joins the President and the organic community in urging that the program receive funding of \$1 million.

INTEGRATED FARMING SYSTEMS

This new ARS program was initiated last year, receiving strong support from the Campaign for Sustainable Agriculture and the IFS network. The program funds long-term research on farming systems that integrate livestock and resource-enhancing crop rotations. We support the funding level of \$1 million for this program.

ANIMAL WELFARE INFORMATION CENTER

The Animal Welfare Information Center (AWIC) of the National Agricultural Library (NAL) was started as a Congressional mandate in the 1985 Farm Bill. By law, AWIC's main missions are to provide information that can be used for: (1) training researchers about more humane animal care and use and (2) improving methods of animal experimentation that can reduce or replace animal use or minimize pain or distress to animals.

As part of the NAL, AWIC also provides information to the public. There are several thousand users of its services, including researchers, technicians, veterinarians, IACUC members, exhibitors, dealers, Federal agencies, educators, students, and others. Due to the great success of the AWIC program in the U.S., it is being duplicated in other countries, with farm animal welfare information included in those services.

AWIC is currently operating on a staff of only 3 full-time and 3 part-time individuals. We request that increased funding be provided to AWIC making it possible to hire more staff which would increase the productivity of the center and enable the center to add the farm animal welfare component (recommended from the 1993 Purdue University and USDA conference on food animal well-being) to their services.

PACKERS AND STOCKYARDS ADMINISTRATION

We support the USDA's fiscal year 1998 request for an increase of \$1,595,000 and twenty staff years to focus on packer competition and industry structure. This funding will support the Secretary's Advisory Committee on Agricultural Concentration recommendations that include appropriating sufficient resources to aggressively enforce the Packers and Stockyards Act.

The HSUS also supports an increase of \$750,000 and ten staff years for poultry compliance requested by the Secretary's Advisory Committee on Agricultural Concentration. We share their expressed concern that contract poultry growers have the ability to bargain with integrators and be protected from unfair and discriminatory practices and that the Secretary be provided the same administrative enforcement authority over poultry that currently exists for red meat.

ANIMAL WELL-BEING RESEARCH

Living conditions for farm animals which provide for their health and well-being are increasingly recognized as an important component of food quality, and are also of increasing concern to the public. Research into understanding what is required to provide for the well-being of these animals is needed to help address these con-

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cerns. However, funding of such research is virtually nonexistent in the U.S. We support the Presidents request that \$29.5 million be appropriated to the Animals division of NRI with at least 50 percent of the funding allocated specifically for well-being research, thereby achieving a greatly needed balance between animal health and animal well-being research.

ANIMAL DAMAGE CONTROL PROGRAM

Mr. Chairman, the Animal Damage Control (ADC) Program is one of the most controversial programs in the Department of Agriculture because it continues to focus on killing wildlife rather than solving the damage wildlife sometimes causes. The ADC Program is the subject of intense public scrutiny; demands for its abolishment are increasing with each passing year.

The majority of federal funding for ADC operational activities is directed toward coyote control in Western states. Although the results of scientific research have shown that control of coyote populations, as opposed to individual offending animals, is futile and even counterproductive in stopping damage, this is the approach that ADC employees continue to use. As a result, far more coyote killing is undertaken than is necessary to effectively handle livestock losses.

The HSUS believes that the solution to the problems posed by the ADC Program lies not in its abolishment, but in changing its focus to one of education and self help. By teaching livestock producers and property managers how to prevent or reduce wildlife-caused problems themselves, the cost of this Program would be substantially reduced, while its effectiveness would markedly increase. Only when initial efforts to prevent or reduce the problem fail to do so would lethal control, under this approach, be conducted by the government with federal funding.

A similar program of shared responsibility has very effectively reduced wildlife-caused damage in Kansas, Missouri and other states for a fraction of the federal share of the ADC Program in most Western states. The HSUS recommends, therefore, that the Subcommittee direct APHIS/ADC to undertake a shift in focus from direct control services to education/self-help. Lethal control would be provided by the government only as a last resort. With such a change, operational funding as proposed by the Administration for the 17 Western states could be reduced by approximately 70 percent immediately, with further reductions possible as the changed focus becomes established. We strongly urge the Subcommittee to reduce the fiscal year 1998 budget of the ADC Program in this manner.

In addition, we urge that the Program be directed to spend 85 percent of fiscal year 1998 funds allocated to ADC research on the identification and development of non-lethal, non-injurious control methods.

ANIMAL WELFARE ACT

The HSUS requests \$12 million for enforcement of the Animal Welfare Act (AWA). A lack of sufficient funding in this area has exacerbated the gross inadequacies that exist in the level of AWA enforcement. These inadequacies result in direct animal suffering in USDA licensed facilities.

Facilities that house animals covered under the Animal Welfare Act are not being inspected with enough regularity to ensure adequate enforcement of the Act: currently, there are 73 inspectors covering 13,000 licensed facilities, including 2992 registered research facilities that house laboratory animals. The HSUS supports funding for an immediate increase in the number of field inspectors, as well as for a mandatory training requirement for all inspectors and investigators.

As was demonstrated in hearings held last year in the Agriculture Subcommittee on Livestock, Dairy and Poultry, the USDA is incapable of enforcing the current laws with its present levels of staffing and appropriations. As Assistant Secretary Michael Dunn stated in that hearing, every time the USDA develops a new way to look at things, class B dealers develop a new way to hide them. The time and resources expended by the USDA to attempt to regulate one class of licensee—class B dealers who sell to laboratories, of which there are less than 40—is disproportionate to the effort that the Department should be expending on all other licensees. Class B dealers who sell random source animals for research should be prohibited and those freed resources should be allocated for the oversight of other licensees.

The HSUS also suggests modifications to the operation of Animal Care that could increase government revenues. These suggestions include: an increase in the fees for dealers and exhibitors, the prohibition of random source class B dealers, reclassification efforts to streamline operations, and the imposition and collection of strict penalties and fines not only for violations of the Act, but also for failure to be present for an inspection. Current estimates indicate that APHIS collects only 25–50 percent of the fines that have been imposed for violations.

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Our organization supports current efforts to strengthen USDA regulations covering large scale commercial breeding facilities. There are a number of serious problems existing in the commercial breeding trade, and USDA licensed facilities need to be brought into compliance immediately or shut down completely if compliance cannot be met.

MARKET ACCESS PROGRAM

The HSUS request that no monies under this program be allotted to the Mink Export Development Council or any other mink industry cooperative. From 1989 to 1995, more than \$13 million in federal funds were handed over to the Mink Export Development Council. Despite this large commitment of funds, which were used primarily for fashion shows overseas, the value of mink exports declined by 33 percent and U.S. production dropped by more than half (Source: Fur Age Weekly). In addition, mink fur is purely a luxury item for which animals are subjected to extreme cruelty. In the last Congress, an overwhelming majority of the Congress agreed that the mink industry should not receive a government subsidy under this program. In light of these facts, we urge that the Congress continue to bar funding to the Mink Export Development Council.

THE HORSE PROTECTION ACT

The HSUS supports the full appropriation of funds as authorized by law under the Horse Protection Act. The authorization limit for the enforcement of the Act has been frozen at \$500,000 since the enactment of the law in 1970. In addition to the devaluing effects of inflation, the actual appropriation has been drastically cut in recent years. USDA received less than \$350,000 for the Horse Protection Act program in fiscal year 1996, and only about \$260,000 of that money was available for enforcement purposes.

The HSUS requests that \$500,000 be appropriated for the next budget year. This amount represents the absolute minimum expenditure necessary to carry out the provisions of the Act. It is essential to insure the proper training of USDA enforcement personnel in the use of thermovision and other diagnostic techniques employed to detect the illegal soring of gaited horses. It will also support some needed research. The full appropriation will enable USDA staff to attend a representative number of target horse shows (approximately 10 percent) and it will help to improve the training and oversight of non-governmental enforcement personnel (known as Designated Qualified Persons or DQP's.)

The HSUS also wishes to go on record as stating that the Tennessee Walking Horse industry has demonstrated that they are clearly incapable of effective self-regulation as envisioned by the 1976 amendments to the Act. Industry inspectors consistently report fewer than half the number of violations cited when USDA personnel are in attendance. Also, an increasing number of walking horse shows have no inspection programs whatsoever.

COMMERCIAL TRANSPORTATION OF EQUINES FOR SLAUGHTER

The promulgation of regulations concerning the humane and safe transport and treatment of horses shipped to slaughter within the U.S. are provided for under a provision of the farm bill passed in 1996. We support full development and implementation of thorough regulations to remedy the mistreatment and inhumane conditions to which horses transported to slaughter are currently subjected.

Our two year investigation and subsequent research confirmed that there are several areas of serious concern regarding how these horses are treated and transported on these long distance trips to one of the eight slaughter plants. These areas include but are not limited the shipment of seriously injured, late-term pregnant mares, foals, and ill or incapacitated horses. In addition there are serious deficiencies regarding the duration of deprivation of water, food and rest during transport, the inappropriate interior height of the transport vehicle, design and use of many livestock vehicles, the lack of segregation of horses by size, the lack of segregation of fractious horses and stallions from others, and the lack of protection from the elements. We are also concerned about the lack of any record keeping by which to establish ownership or track these animals. We urge full funding be appropriated for implementation of these regulations and specifically request \$425,000, the approximate amount requested by the USDA. We urge that the money allocated include adequate funding for USDA FSIS inspectors to enforce these regulations.

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PREPARED STATEMENT OF NAOMI B. LYNN, CHANCELLOR, THE UNIVERSITY OF ILLINOIS AT SPRINGFIELD AND NORM STEPHENS, PRESIDENT, LINCOLN LAND COMMUNITY COLLEGE, UNIVERSITY OF ILLINOIS

Mr. Chairman and distinguished members of the Agriculture, Rural Development, and Related Agencies Subcommittee: Lincoln Land Community College (LLCC) and the University of Illinois at Springfield (UIS) have been engaged in a joint project, the Rural Education and Technology Center, in recognition of the educational and medical needs of rural Central Illinois and in making a commitment to meeting those needs through the application of distance learning and other advanced technologies.

The project includes the construction, equipping and operation of a new state-of-the-art learning and information center for colleges, schools, businesses and homes in rural Central Illinois. The project will deliver education and training programs to hard-to-reach and historically underserved rural residents and communities. The project will provide high quality services that will result in positive economic, educational, health-related and social development for this region.

The project will provide education and information through a computer-based interactive network for farm owners, rural businesses and homes. It will assist the small rural high schools to deliver comprehensive programs for their students. It will consolidate telecommunications systems among LLCC, UIS and other systems in order to deliver secondary and post-secondary distance learning programs cost-effectively throughout the immediate districts and throughout the state. It will provide expanded facilities for originating distance learning programs, for teleconferencing and other education services. It will also provide rural Illinois citizens with greater access to academic and training programs and necessary support services.

The Center will be located on the campus of LLCC, but in close proximity to UIS, whose campus is contiguous to LLCC. The facility will house programs and services from both institutions that relate to health education, continuing education, computer-based learning laboratories, interactive distance learning classrooms, agricultural programs and business development programs.

This is a unique joint community college-university project, cooperative in nature, technological in focus, and it addresses a need in America's heartland-rural economic development.

USDA'S Rural Business Enterprise Grant (RBEG) program has just awarded a \$1.5 million grant to begin the work on the state-of-the-art high tech learning and information center to serve rural residents of Central Illinois. In October of 1996, the USDA, through its Medical Link grant program, awarded a \$336,124 grant to LLCC in partnership with UIS for a new joint telecommunications system for the center to link LLCC and UIS to several rural facilities and networks.

LLCC and UIS are seeking matching funds for the RBEG grant from the state of Illinois. In partnership, LLCC and UIS are submitting an application for funding to USDA for fiscal year 1998 funding to complete the project. We urge your continued support for the RBEG program and our Center.

PREPARED STATEMENT OF R. MAX PETERSON, EXECUTIVE VICE PRESIDENT,
INTERNATIONAL ASSOCIATION OF FISH AND WILDLIFE AGENCIES

The International Association of Fish and Wildlife Agencies was founded in 1902 as a quasi-governmental organization of public agencies charged with the protection and management of North America's fish and wildlife resources. The Association's governmental members include the fish and wildlife agencies of the states, provinces, and federal governments of the U.S., Canada, and Mexico. All 50 states are members. The Association has been a key organization in promoting sound resource management and strengthening federal, state, and private cooperation in protecting and managing fish and wildlife and their habitats in the public interest.

NATURAL RESOURCE CONSERVATION SERVICE (NRCS)

The Natural Resource Conservation Service has immense responsibilities for implementing the conservation provisions of the 1985 Food Security Act (FSA), the 1990 Food, Agriculture, Conservation and Trade (FACT) Act, and the Federal Agricultural Improvement and Reform (FAIR) Act of 1996.

Technical assistance.—In addition to the existing technical assistance workload, increased technical assistance funds are needed to implement additional provisions of the 1996 FAIR Act. For example, the Environmental Quality Incentive Program (EQIP), Wetland Conservation Mitigation, Mitigation Banking, the Conservation Farm Option, the Grazing Lands Conservation Incentive, Wildlife Habitat Incentive

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Program, and the Farm Land Protection Program are all provisions requiring additional technical assistance from the Service for which there are insufficient funds in present budget recommendations. The Association strongly urges that adequate technical assistance funding be provided for these additional responsibilities in order to ensure that maximum agricultural and natural resource benefits accrue from these programs. We note and applaud the 346 FTE increase in staffing levels for technical assistance under Conservation Operations. There remains, however, an OMB constraint on the customary 19 percent allocation from EQIP which could result in as much as a \$38 million shortfall for technical assistance in designing complicated engineering proposals for livestock projects. That constraint needs to be removed. The Association endorses the NRCS request for a \$15 million increase in technical assistance and soil survey to update older soil surveys, prepare soil surveys for digitization and train field staff to improve technical assistance to users of soil survey data.

State technical committees (STC).—The 1990 FACT Act required that State Technical Committees (STC) be established to facilitate interagency cooperation and coordination of technical guidelines for the conservation programs. Further, the USDA 1995 Reorganization Act specifically exempted the STC from the Federal Advisory Committee Act (FACA). The 1996 FAIR Act further added additional members to the STC. Federal-State coordination is an ongoing normal function which is required with or without a formal State Technical Committee. We commend the strong efforts of the Chief of NRCS that has ensured the establishment of the State Technical Committees in each State with representation from the respective State fish and wildlife agency.

Wetland determination.—We believe the need for wetland determination, certification, and mapping is great and urge NRCS to proceed as soon as possible, under the guidance of FAIR Act of 1996. The Association urges expeditious completion of the wetland determinations required to implement the Swampbuster provisions of the 1985 FSA, 1990 FACT Act, and the 1996 FAIR Act as well as the FAIR Act directed interagency cooperation, whereby NRCS assumed responsibility for wetland designation for Section 404 (Clean Water Act) purposes on farmland, including tree farms, rangelands, native pasture, and other private lands used to produce or support the production of livestock. The Association and individual states wish to continue to work with NRCS to help achieve these goals.

Public Law 566.—The Association generally supports the \$40 million request for small watershed (Public Law 566) projects. That support is based upon continued emphasis on undated watershed planning and management. Such efforts could utilize and expand upon existing Public Law 566 plans examined in light of present day issues of wetland protection, water quality enhancement and fish and wildlife habitat. The greatest potential for these programs is for land treatment measures that retain the water on the land, improve infiltration, improve water quantity and quality, and provide fish and wildlife habitat. Structural and non-structural land treatment activities require state and local matching funds and are therefore leveraged to provide greater conservation benefits for each federal dollar spent while promoting valuable partnerships among states, local agencies, and other organizations.

Waterbank.—The Association has been concerned that the very valuable Waterbank Program that protects 75 million acres of wetlands and associated uplands habitat would be lost under the 1996 FAIR Act. The present 75 million acres protected under Waterbank may now qualify for the Conservation Reserve Program (CRP). The Association applauds the efforts of USDA to apply this appropriate opportunity to protect these valuable wetlands and associated uplands.

Wildlife Habitat Incentive Program (WHIP).—The Association supports the Administration's request for \$30 million for the second year of the WHIP and a concerted effort to involve the state fish and wildlife agencies.

Wetland Reserve Program (WRP).—The primary objectives of the Wetlands Reserve Program are to protect, enhance and restore valued wetlands and improve wildlife, including migratory bird, habitat, by providing payments for easements. The Association supports the Administration's proposal to increase the authorized level to \$164 million for fiscal year 1998, an increase of \$45 million over the fiscal year 1997 funding level and applauds the goal of a 212,000 acre WRP sign-up. The Association continues to be concerned about the cumbersome, complicated procedures that have resulted in the very slow progress and high dropout rate for this program. NRCS should make no regulatory decision which would unduly restrict possible enrollment and should carefully examine regulations to see if they are hindering present program success. Factors motivating enrollees to drop out must be identified and remedied.

National buffer strip initiative.—The National Academy of Sciences has found that buffer strips can reduce off-field pollution by 70 percent, thus also contributing to

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meeting non-point service remediation goals under the CWA. NRCS has committed special emphasis and a major effort to use the strip practices covered by the continuous CRP sign-up in a more targeted fashion. Unlike the large or whole field CRP retirements, buffer strips will require extensive outreach plus a much more attractive rental rate above that presently allowed. The Association supports the allocation of funds specifically for outreach to increase participation in the various buffer strip practices.

Forest Incentive Program (FIP).—The Forest Incentive Programs (PIP) has multiple resource values for fish, forests, wildlife, clean water and erosion control. The Association Supports the NRCS request to continue funding at the fiscal year 1997 level of \$6.325 million.

National Natural Resources Conservation Foundation.—The Association applauds the authorization of the Foundation and recommends initial funding of \$1 million. This Foundation can play an important role in facilitating conservation landowner recognition and fundraising for highlighting conservation achievements on private land, promote innovative solutions to conservation problems associated with private lands, and funding education and research related to conservation of natural resources on private land.

Conservation farm options (CFO).—The CFO provides a voluntary approach to implementing a full farm conservation plan for total resource management on a farm. The Association supports the concert and the \$15 million request for the pilot effort.

Farmland Program (FPP).—The FPP provides federal matching funds to the state and local sources to cost share in the acquisition of easements. The Association supports the concept and the \$18 million request for fiscal year 1998.

FARM SERVICE AGENCY (FSA)

An adequately funded budget for the FSA is essential to implement those conservation related programs and provisions under FSA administration as a result of passage of the Federal Agricultural Improvement and Reform (FAIR) Act of 1996. The Association strongly advocates that the budget include sufficient personnel funding to service a very active CRP sign-up.

FSA programs have tremendous quantifiable impacts on natural resources, and yield substantial public as well as private benefits. Building on the provisions of the 1985 FSA, the 1990 FACT Act, and the 1996 FAIR Act, the Association wants to ensure that each program accomplishes the broadest possible range of natural resource objectives, and encourages close cooperation between FSA, NRCS and the State Technical Committees in implementing the 1996 FAIR Act.

We urge FSA to prepare regulation and budget to implement the Flood Risk Reduction Program and make every effort to ensure that language used in its easements and agreements provide a streamlined basis for appropriate administration and are user-friendly.

The continued administration of CRP under the guidelines of the 1996 FAIR Act is a very significant and valuable commitment of USDA and the FSA. The Association applauds FSA efforts to fund and extend CRP contracts for the multiple benefits that accrue to the public as well as the landowner. The Association is especially pleased to note the commitment to reach as soon as practical and maintain the authorized 36 million acres in CRP. The Association provides special thanks to FSA for the continuous CRP sign-up of high value environmental practices and urges a special effort to advertise and increase landowner participation.

ANIMAL AND PLANT HEALTH INSPECTION SERVICE (APHIS)

Animal Damage Control, a unit of APHIS, is the Federal agency responsible for controlling wildlife damage to agriculture, aquaculture, forest, range and other natural resources; for protecting public health and safety through control of wildlife-borne diseases; and wildlife control at airports. Its control activities are based on the principles of wildlife management and integrated damage management and are carried out cooperatively with State fish and wildlife agencies. Most APHIS operational work is cost shared between the Federal Animal Damage Control program, State and county governments, agricultural producers, and other cooperators.

The cooperation and support of the agricultural community are essential to maintaining wildlife populations because much of the Nation's wildlife exists on private agricultural lands. A progressive animal damage control program which reduces the adverse impact of wildlife populations is necessary to maintain the support of the agrarian community and to counter increasing pressures for indemnity due to wildlife damage.

Since Congress transferred ADC to USDA, the Association has worked closely with this program on numerous issues critical to the State fish and wildlife agencies

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such as the proposed fur ban by the European Union. In the realm of making the trap a more humane device, ADC has developed a trap monitoring device that would emit a signal when an animal is caught and a tranquilizer tab that would keep an animal calm. This would allow the ADC biologist to check traps more frequently and remove the captured animal without inflicting undue pain and suffering. The cost of implementing this new technology would be \$500,000, which the Association supports.

The Fort Collins National Wildlife Research Center has established a trap testing program and is the appropriate place to conduct newly required information necessary for the development more humane traps and trapping systems. While some question the use of certain traps, no widely applicable alternative trapping devices are available. IAFWA requests that 350,000 be added to the Methods Development Program at the Center to work with the states cooperatively to support this trap research effort.

One of the strengths the ADC program brings to the wildlife community is their professional leadership in wildlife damage management. The Association has become aware that over the past several years budget shortfalls have caused the program to cut back on the number of key professional positions; therefore, the danger of losing this edge is being threatened unless Congress provides the needed \$1 million to maintain the high level of professional leadership.

The Association has become aware of serious workload burdens and the continued requests from citizens and local governments who are willing to pay 100 percent of the cost of the control operations. We are also aware of the reduction in staff years, irrespective of the funding source. Therefore, because of the entrepreneurial nature of this small program, the Association encourages the Congress to consider directing the Administration not to count the personnel who are fully funded by non-federal money toward the staff year reductions.

There is a growing need for new alternative control methods to come with the increasing number and diversity of wildlife damage problems. The Association recommends that Congress make \$926,000, used for moving personnel to Ft. Collins in fiscal year 1997, now be available for development of methods because many of the current tools are becoming less acceptable to the public. The only source of new methods is through research.

We commend Congress for recognizing the need to move research scientists to Ft. Collins to begin using the new wildlife damage research facilities. The Association urges Congress to finish what it has begun and provide the \$14 million to complete this \$37.7 million state-of-the-art facility.

The Association is pleased with the accomplishments of the Berryman Institute for Wildlife Damage Management at the Utah State University in Logan, Utah. However, the activities have seemed to reach a plateau, and we would like to see the Institute enhance its capabilities to conduct social science research, expand continuing education programs, and start a new high quality scientific journal for wildlife damage management that would be patterned after other established journals. To reach these new goals, the Association supports an increase of the funding to the Berryman Institute by an additional \$236,000.

COOPERATIVE STATE RESEARCH, EDUCATION, AND EXTENSION SERVICE (CSREES)—U.S.
DEPARTMENT OF AGRICULTURE

We note that the President's fiscal year 1998 budget requests continued level funding for Smith-Lever 3(b&c) funds at \$268,493,000 and provided for a total of \$417,811,000, including 3(d) items, which is an \$8.462 million decrease from the fiscal year 1997 appropriation. IAFWA appreciates the Administration's continued support for Smith-Lever 3(b&c) base programs that provide "Block Grant" type funds for Land Grant Universities to permit educational outreach based on local needs assessment. However, we recommend a 5 percent increase for these programs: i.e., that Smith-Lever 3(b&c) funds be increased to \$281,917,650, provided that not less than 35 percent of this increase be applied to Environmental Stewardship Education programs as part of Extension's Natural Resource and Environmental Management (NREM) education programs which are so relevant to the Nation's needs.

We support expanding Extension programs in natural resource public issues education on such critical issues as wetlands, endangered species, and human/wildlife interactions, as well as to strengthen its programs in urban and community forestry and environmental education as called for in the 1990 FACT Act. We are concerned that the Administration is requesting a decrease for Water Quality education in 1998. This is an area of significant concern for the Nation, and it must receive increased attention.

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IAFWA supports the CSREES and State programs in Environmental Stewardship Education and NREM programs, and encourages continuation of close cooperation between State CES's and their State fish and wildlife agencies, as well as other appropriate State and Federal agencies and conservation groups. Extension 4-H Youth natural resource programs and projects continue to increase with over 1,350,000 youngsters presently enrolled from both urban and rural communities across the Nation.

The Association is disappointed that the Administration has zeroed out funding for the Renewable Resources Extension Act (RREA) for 1998. The fiscal year 1997 funding was not adequate for the task at hand, and this program, which is leveraging about \$4 in cooperative funding for each \$1 of federal funds, desperately needs continuing support. The \$500,000 increase for RREA in fiscal year 1994 and fiscal year 1995 to \$3,341,000 has been judiciously targeted to ecosystem management as mandated. These funds have leveraged significant state and local level investment and currently enable 22 states to implement professional continuing education programs for natural resource professionals, to increase private landowners' understanding, and to implement new technologies for addressing landscape environmental problems.

IAFWA recommends that the Renewable Resources Extension Act be funded at a minimum level of \$9.5 million in fiscal year 1998. RREA has been reauthorized to the year 2000. IAFWA supported and appreciated the \$1 million increase proposed by the Administration for RREA in the investment proposals Section in fiscal year 1994, later reduced to \$500,000 and sustained for fiscal year 1995. Even this small increase enabled 13 multi-state, regional or national forest ecosystem management projects to be implemented. When apportioned to State Extension Services, these funds have been effectively leveraged with cooperating partnerships at an average of about four to one, with a focus on dissemination of educational programs to private landowners (rural and urban) and continuing education of professionals.

The Association is disappointed that the practical and applied problems addressed by the Rangeland Research Grants (RRG) program are zeroed out in the President's 1998 budget. Over one-half of the land area of the United States is rangeland, and elimination of the only Federal competitive grants program for rangelands has serious implications for wildlife, watersheds and other natural resources. A recent study shows that modest appropriations for RRG have supported some of the most important rangeland research conducted over the past decade, and wildlife issues on rangelands will present some of the more important rangeland research problems over the next decade. The IAFWA supports restoration of the Rangeland Research Grants \$500,000 budget for fiscal year 1998.

IAFWA notes that \$15 million has been recommended in the President's budget for pest management, a \$5 million increase from 1997. IAFWA recommends that not less than 25 percent of the total appropriation for pest management should be dedicated to educational programs for control of vertebrate pests (wildlife damage management), and to address noxious weed problems on rangeland for restoring, managing and sustaining the biological integrity of the Nation's natural resource base upon which the agricultural economy depends.

LETTER FROM JEAN HOCKER, PRESIDENT, LAND TRUST ALLIANCE

Washington, DC, April 11, 1997.

Hon. THAD COCHRAN,
*Chairman, Subcommittee on Agriculture, Committee on Appropriations, U.S. Senate,
Washington, DC.*

DEAR MR. CHAIRMAN: On behalf of the Board of Directors and members of the Land Trust Alliance (LTA), I am sending this letter to be included in the record of testimony on the fiscal year 1998 appropriation for the conservation programs of the Department of Agriculture.

The Land Trust Alliance serves more than 1,200 land trusts across the country. These are independent grassroots organizations dedicated to protecting land and the quality of life in their communities through private, voluntary action. Working with a cooperative, incentive-based strategy, these groups have helped save more than 4 million acres of wetlands and wildlife habitat, productive farm and forest lands, and other significant resources.

Land trusts across the country are working in partnership with the conservation programs of the Department of Agriculture. The farmland protection program is an excellent example of such a partnership opportunity. It is an especially worthwhile and cost effective program that leverages state funding to keep threatened agricultural land in production. It accomplishes conservation goals through private, vol-

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untary, incentive-based action. LTA supports the President's request of \$18 million, which will allow this program to protect valuable farmland across the country. Ideally, this program would not be subject to limits on its access to the \$35 million in funds from the Commodity Credit Corporation authorized by the farm bill.

The Conservation Reserve Program and the Wetlands Reserve Program have both made a real difference in the protection of sensitive lands. LTA supports the Administration's request of \$1.926 billion and \$164 million, respectively, for these programs. We also support the Administration's request for funding of the Environmental Quality Incentives Program at \$200 million, the Conservation Farm Option program at \$15 million, and the Wildlife Habitat Incentives Program at \$30 million.

The 1996 farm bill created the National Natural Resources Conservation Foundation. Congress envisioned that this foundation would serve a role for the USDA's Natural Resources Conservation Service similar to that served by the National Fish and Wildlife Foundation for the U.S. Fish and Wildlife Service. This nongovernmental, charitable non-profit organization would raise private funds and accept gifts of real property to promote public-private partnerships, conduct educational and demonstration projects, and encourage innovative solutions to the conservation of natural resources on private agricultural lands. Unfortunately, to date no start-up funds have been appropriated to the Foundation. LTA strongly supports including \$1 million in this appropriations bill for the Foundation start-up funds authorized under the farm bill.

We greatly appreciate your past and future support of USDA's conservation programs. Thank you for considering the views of LTA and the 1,200 volunteer citizen conservation organizations that make up the nation's private land trust movement as you make your funding decisions for the coming fiscal year.

Sincerely,

JEAN HOCKER,
President.

PREPARED STATEMENT OF MERLE JEFFERSON, DIRECTOR, DEPARTMENT OF NATURAL RESOURCES, LUMMI INDIAN NATION, LUMMI INDIAN BUSINESS COUNCIL

Request.—An appropriations increase to the Department of Agriculture's Fund for Rural America Rural Business Enterprise Grants. This request is for \$385,000 for each of three years 1998–2000 to complete the second phase of the Northwest Tribal Clam and Oyster Project. The project is supported by the Tribes in the Pacific Northwest, Washington State Departments of Health and Fisheries, and the private commercial shellfish industry.

NORTHWEST TRIBAL CLAM AND OYSTER PROJECT

Background.—Indian Tribes in Western Washington gathered shellfish on the Pacific ocean for thousands of generations. Treaties between the United States and these Tribes, signed in the mid-1800's, provided protection for the continued rights of the Tribes to these shellfish. In the following century urban, forest and agricultural developments have seriously reduced shellfish resources impinging on the treaty-guaranteed rights. In late 1994, a U.S. District Court decision upheld the Tribal rights to the shellfish resource and recognized that enhancement of the resource would be essential to the establishment of a meaningful right to help Tribes enhance their lands and assist in conflicts with private land owners. In fiscal year 1994, this Subcommittee directed the Department of Agriculture to renovate and begin to operate a shellfish hatchery on the Lummi Indian Reservation at a level of production adequate to supply seed for enhancement of the resource by Tribal businesses on a regional basis. Congress further instructed the Department of Agriculture to assist in funding the hatchery operations in fiscal year 1995 in order to move the Tribal shellfish enterprise towards self-sustainability.

The Department of Agriculture has provided the grants as directed, and the hatchery has successfully distributed nearly 4 billion shellfish larvae to Northwest Tribes which has produced 50,000 bags of oyster seed with a value of over \$2,000,000 at harvest in 2000–2002. Additional jobs and value are generated by processing, marketing and utilization of the product. These efforts have brought the Tribes closer to self-sustaining projects that will help meet increasing world seafood demands. In fifteen years fish farming could provide 40 percent of all fish for the human diet and more than half the value of the global fish catch.

Fiscal year 1998 USDA appropriations request.—The second phase of the Northwest Clam and Oyster Project has two primary components: (1) The expansion and development of remote setting of seed capability in rural areas of the Pacific North-

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west; and, (2) The addition of hatchery capability for additional species for seed production:

(1) Remote setting of seed

Oyster larvae raised at the Lummi Hatchery is the first step of production. The Oyster Larvae produced is then put into large tanks where they are combined with large volumes of cultch, in the case of oysters—shell. Manila clams, after setting, need room to grow to a large enough size to gain the survivability necessary for commercial viability. This is best accomplished at juvenile rearing sites near the growout area.

Both of these activities are limited to the Central Hatchery and would be much more efficient at on-site facilities for this phase of seed production. Far more efficiency is gained through shipping larvae and small clam seed early in their development. In the case of oysters the difference would be a small jar or zip-lock bag of larvae compared with a semi-load of set seed.

We have identified potential regional sites which can be used by Tribes in those areas for the setting and grow-out of seed. The proposed sites are: (1) Squaxin Island in South Sound; (2) Port Gamble Bay in Hood Canal; (3) Sequim Bay in the Strait of Juan de Fuca; and, (4) Tulalip Bay in the Admiralty Inlet. The funds would build setting tanks for oysters, and upwell systems for manila clams.

In 1998, we request \$385,000 which would include the construction of the facilities, operations costs for the Lummi Seed Production at \$100,000 for direct costs and \$30,000 for indirect expenses, and \$80,000 for additional species capability. We further request \$385,000 for 1999 and 2000 with costs to include the operations of the facilities at \$175,000; operating costs for the Lummi Seed Production would be \$100,000 for direct costs; \$30,000 for indirect expenses; and, \$80,000 for additional species capability.

(2) Additional species capability

In Phase I the hatchery focused on manila clam and pacific oyster production. In Phase II the capability to produce additional oyster species, mussels¹ and geoduck clams² would be added to the hatchery's capability. This additional level of services would require some additional capital expenses for the existing facility and training and labor costs during the development phase. (The cost for this portion of the plan would be \$80,000 for each of the years 1998–2000 as identified above.)

The total project cost for 1998–2000 is \$1.13 million.

In addition to the funds requested to meet the specific line items shown on the following budget page, the Lummi Nation will re-invest shellfish revenues in the Project. These revenues have been re-invested in each year of Phase I of the Project; the amount re-invested has increased each year. In fiscal year 1998, we anticipate sales of adult oysters from the grounds at approximately \$45,000 and hatchery product sales to be approximately \$165,000, for a total of \$210,000 in matching funds for the first year of Phase II. We expect continued growth in these sales in subsequent years of the project.

CONCLUSION

Mr. Chairman the first phase of this project has been very successful with tribes rapidly increasing their capacity for growout of oysters and clams using seed from the Lummi Shellfish Hatchery. More than 50 jobs were initially created by this project which will expand to nearly 200 when harvest of the created crops occurs. There is a great opportunity to increase existing production with new low cost regional facilities and additional species. These sites are in rural areas of Washington that fit the federal mandates for rural development and tribal capacity building.

We appreciate the support this Subcommittee has demonstrated during Phase I of this Project, and request that you appropriate the necessary funds to the USDA, which will along with Tribal matching funds, will allow for the continuation of this valuable project.

¹ Mussel production in the State of Washington will exceed 1,000,000 pounds in 1997 and is expected to double in 1998. Hatchery seed is need for this expansion.

² Geoduck clam is an emerging industry that needs seed for development. This animal presently brings \$7.50 per pound live weight. A market size clam of 1.5–3 pounds is produced in 3–5 years. Sub-tidal populations are inadequate to meet market demands.

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NORTHWEST SHELLFISH PROJECT

	1998	1999	2000
Construction (remote setting/juvenile rearing at four sites):			
Insulated fiberglass tanks 4 @ \$12,000	\$48,000	.....	.....
Tank heaters and controls 4 @ \$4,500	18,000	.....	.....
Seawater pumps and controls 4 @ \$4,000	16,000	.....	.....
Concrete slab and drains 4 @ \$1,500	6,000	.....	.....
Aerators and piping 4 @ \$1,500	6,000	.....	.....
Upwellers 4 @ \$13,000	52,000	.....	.....
Set-up and construction	29,000	.....	.....
Total construction	175,000	.....	.....
Juvenile rearing at four remote setting sites:			
Salaries 4 @ \$28,000 .....	.....	\$112,000	\$112,000
Operations including utilities 4 @ \$12,000 .....	.....	48,000	48,000
Miscellaneous 4 @ \$3,750 .....	.....	15,000	15,000
Total juvenile rearing operations at four remote setting sites ...	.....	175,000	175,000
Hatchery operations salaries:			
Hatchery manager (.75 FTE)	27,000	27,000	28,000
Shellfish manager (.75 FTE)	20,000	20,000	21,000
Technicians (4 FTE)	69,000	71,000	74,000
Subtotal hatchery operations salaries	116,000	118,000	123,000
Fringes @ 22 percent	25,520	25,960	27,060
Total hatchery operations salaries	141,520	143,960	150,060
Operations costs:			
Utilities	25,000	25,000	27,000
Repair and maintenance	7,000	7,000	9,000
Supplies	18,000	17,560	20,000
Telephone	2,000	2,000	2,500
Total operations costs	52,000	51,560	58,500
Capitol equipment for hatchery:			
Microscope	5,000	.....	.....
Filters	8,000	.....	.....
Pumps	3,480	.....	.....
Monitoring system .....	.....	8,000	.....
Upwell boxes .....	.....	6,480	.....
Oxygen generator .....	.....	.....	1,440
Total capital for hatchery	16,480	14,480	1,440
Total project costs	385,000	385,000	385,000

PREPARED STATEMENT OF GARY A. GLENN, PRESIDENT, MASSACHUSETTS FOUNDATION FOR EXCELLENCE IN MARINE AND POLYMER SCIENCES

This testimony outlines urgently needed activities in the area of research on biodiversity. The outcomes of this research will contribute to knowledge of U.S. and global food chains, agricultural practices and food security. This knowledge will be essential to long-term United States participation in global food markets, including sale of U.S. commodities internationally. The present testimony also describes an in-

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novative method for involving U.S. multinational corporations as players in the effort to identify and preserve global diversity, including at the microbial level.

INTERNATIONAL BUSINESS AND BIODIVERSITY

Most prominent scientists acknowledge the vast importance of biodiversity protection and enhancement to the future well-being of mankind. Some have argued that biodiversity is the single most urgent issue facing mankind in the 21st century, since world food production will increasingly rely on biological diversity. Yet most real world decisions that effect biodiversity are made not by scientists or governments but by major multinational corporations and other private sector entities. The connection between biodiversity needs and corporate awareness of these needs is at present very weak. Regrettably, most scientific and governmental proposals effecting biodiversity involve increased regulation and other actions unpopular with companies.

CHANGING THE FOCUS TOWARD CORPORATE INVOLVEMENT

The success of the environmental movement in the U.S. was greatly advanced when major sectors of the U.S. corporate community perceived that environmental protection was in their interest and that significant business opportunities existed in the design, manufacture and sale of environmental products and services. The same future is available in the area of biodiversity, and business awareness will enable a rapid acceptance of biodiversity principles.

DEFINITION OF BIODIVERSITY

What exactly is "biodiversity" and why is it so essential to our future well-being and prosperity? Simply stated, biodiversity is a term that describes the basic natural biological systems on which we rely for survival. These systems include the processes that underlie agricultural production, control of pests, forestry, aquaculture, the existence of drinkable water and breathable air, and the production and manufacture of most items on which we depend for good health, including medicines and drugs. In all of these cases, mankind relies on the diversity of plant and animal species which comprise ecological systems. We now live in a global economy, which offers us great opportunities, but which also means that dysfunction in any part of the global system can directly impact the lives of Americans. In past decades Americans could be relatively self-reliant, but today, what happens in Europe, Asia or Latin America can immediately and dramatically affect our lives. Thus, it is in our immediate and direct self interest to encourage and promote biodiversity in those parts of the world on which we rely and with which we trade and invest.

GLOBAL NATURE OF BIODIVERSITY

We know that species diversity tends to become richer and more complex in warmer regions. Many of the fruits, vegetables, grains, and forest products on which we rely have their origins in warm weather regions, and we continue to depend on infusions of natural species from these areas. Similarly, many of our medicines and drugs have tropical origins. It is also in tropical areas that many current biodiversity crises are being played out. Many countries with the most crucial stores of plants and animal species are also ones that lack the resources for serious and widespread biodiversity protection programs. These countries are also targets for U.S. trade and investment; for instance, several of the countries in the U.S. National Export Strategy that have been identified as "Big Emerging Markets" (BEM's) are locations of major biodiversity confrontations (i.e., Brazil, Argentina, China, India). In this century 75 percent of the worlds variety of crops have become extinct: most of these have been in warm weather regions.

MICROBIAL BIODIVERSITY

Scientists are only now beginning to understand the nature and function of microbial life, especially as it relates to ecological processes that effect human foods and other mechanisms. Only in the past few years have we realized that biodiversity extends deeply into the three domains of life on earth, and that fundamental interactions underlie the ability of many life forms to survive. Certainly in the area of agriculture, as natural environments are challenged by human activity, it is essential that we learn to understand these interactions. Our ability to obtain useful resources from microbial biodiversity is directly related to knowledge of microbial life, and the maintenance of these life forms on earth.

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CURRENT INTERNATIONAL BIODIVERSITY EFFORTS

Serious action on biodiversity issues in countries like Brazil, Indonesia, India and China will require massive efforts on the parts of domestic and foreign companies, governments, citizen groups, and other institutions. How can these actions be encouraged by the United States? U.S. foreign policy can and has been supportive of biodiversity issues; the U.S. was a major player in the most significant meeting ever to be convened on biodiversity and environmental issues, the Rio de Janeiro conference of 1992. However, it is acknowledged that many—perhaps most—of the guidelines and goals enunciated at the Rio conference are not being complied with or honored. A key problem is that responsibility for implementation has been placed on the shoulders of governments faced with development imperatives that create jobs and alleviate poverty. In most tropical countries, expanding populations and continued poverty create conditions that favor development over environmental needs. What is missing is a realization that development and biodiversity/environmental protection are not mutually exclusive. The recent history of the United States, where continued economic growth has occurred in harmony with improved environmental protection, has shown that wise and carefully planned development can actually promote environmental quality. This has been accomplished because of the willingness of the private sector to take environmental issues seriously and to incorporate environmental factors into manufacturing methods, product design, space planning, building, and waste management. The same kind of thinking can reap tremendous benefits in countries such as Brazil and India. But the effort needs to be led and promoted by those who are doing the developing—namely by the private sector. That community often includes as major players U.S. companies and investors.

NEED FOR U.S. PRIVATE SECTOR LEADERSHIP

It should be recognized that virtually all United States trade and investment practices have some impact on biodiversity issues. Some activities have immediate and dramatic effects—for instance, investments in natural resource exploitation or urbanization/construction/coastal development. Virtually all other economic activities require the use of some natural resources, land, water, energy, etc. All of these activities impact biodiversity in some way, since biodiversity involves the natural balance of organisms from the microbial level up to large-scale plant and animal populations. Similarly, certain industries depend very heavily on continued availability of natural products—pharmaceuticals, medical materials, foods, materials—but most others also rely on continuation of diversified biological systems. This has been recognized in the writing of the new ISO 14,000 international environmental standards, which bring a global focus to the management of environmental policies. Biodiversity, as the foundation for all healthy ecological systems, is a centerpiece in these new standards.

BIODIVERSITY RESEARCH AND TRAINING ACTIVITIES

In order to involve the U.S. private sector in the effort to identify, protect and preserve the biodiversity upon which U.S. and global agriculture depends, it is proposed to carry out biodiversity training programs for senior officers of United States corporations that are investing in or otherwise involved in regions of particular biodiversity vulnerability. It is intended to carry out the training activities in Hawaii for the Asian Pacific region and in Massachusetts for Latin America. The training programs will use existing intellectual and academic resources in the two states, and will also utilize existing physical facilities. Hawaii and Massachusetts are ideal locations for this kind of training, since they are two of the world's leading centers of research on biodiversity issues and problems. In order to organize and administer this pioneering effort, we request that the Committee recommend funding for \$740,000 in fiscal year 1998, with instructions that the project be carried out by a partnership between the Massachusetts Foundation for Excellence in Marine and Polymer Sciences and the Partners in Development corporation of Hawaii.

PREPARED STATEMENT OF THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Chairman Cochran and members of the subcommittee: The Metropolitan Water District of Southern California (MOOD) appreciates the opportunity to submit testimony regarding the U.S. Department of Agriculture's (USDA) fiscal year 1998 budget, for the Hearing on Agriculture, Rural Development and Related Agencies Appropriations. MWD is a public agency created in 1928 to meet supplemental water de-

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mands of those people living in what is now portions of a six-county region of southern California. Today, the region served by MWD includes nearly 16 million people living on the coastal plain between Ventura and the Mexican border. It is an area larger than the State of Connecticut and, if it were a separate nation, would rank in the top ten economies of the world.

Included in our region are more than 225 cities and unincorporated areas in the counties of Los Angeles, Orange, San Diego, Riverside, San Bernardino, and Ventura. We provide more than half the water consumed in our 5,200-square-mile service area. MOOD's water supplies come from the Colorado River via the district's Colorado River Aqueduct and from northern California via the State Water Project's California Aqueduct.

INTRODUCTION

MWD is encouraged by USDA's commitment to implementation of conservation programs and is especially encouraged by the opportunities afforded by the reauthorized and newly established agricultural conservation programs that are part of the Federal Agricultural Improvement and Reform Act of 1996 (Public Law 104-127). MWD firmly believes that cooperative, locally-led conservation programs, that are incentive-based and facilitate the development of partnerships, such as the conservation programs in Public Law 104-127, are critical to addressing natural resources concerns, such as water quality degradation, wetlands loss and wildlife habitat destruction. It is vital that Congress provide USDA with the funding necessary to successfully carry out its commitment to natural resources conservation.

Our testimony focuses on USDA's conservation programs that are of major importance to MOOD. In particular, MWD urges your full support for USDA's Environmental Quality Incentives Program (EQIP). Full funding for this program is essential for achieving Colorado River Basin salinity control objectives through the implementation of salinity control measures as part of EQIP. In addition, MWD requests your full support for the Wildlife Habitat Incentives Program, Conservation Reserve Program, Wetlands Reserve Program, Integrated Pest Management and related programs, and the Water and Waste Disposal Loans and Grants program. Sufficient federal funding for these USDA programs is necessary to achieve wildlife habitat restoration and source water quality protection objectives in the Colorado River Basin and in California's Sacramento/San Joaquin Bay-Delta (Bay-Delta) estuary.

ENVIRONMENTAL QUALITY INCENTIVES PROGRAM

The Environmental Quality Incentives Program provides cost-sharing and incentive payments, technical assistance and educational assistance to farmers and ranchers for the implementation of structural practices (e.g., animal waste management facilities, filterstrips) and land management practices (e.g., nutrient management, grazing management) that address the most serious threats to soil, water and related natural resources. EQIP is to be carried out in a manner that maximizes environmental benefits per dollar expended. This assistance is focused in conservation priority areas identified by the Natural Resources Conservation Service's State Conservationists, in conjunction with State Technical Committees and Farm Service Agency personnel. Sufficient federal funding for implementation of EQIP is critical in order to achieve Colorado River Basin salinity control objectives and source water quality protection and ecosystem restoration objectives in the Bay-Delta estuary and watersheds tributary to the Bay-Delta.

In 1984, Congress amended the Colorado River Basin Salinity Control Act (Act) to authorize the Secretary of Agriculture to establish a voluntary cooperative salinity control program with landowners to improve on-farm water management and reduce watershed erosion on non-federal lands and on lands under the USDA's control. In Public Law 104-127, Congress amended the Act to direct the Secretary of Agriculture to carry out salinity control measures in the Colorado River Basin (Basin) as part of EQIP. Such salinity control measures are to include watershed enhancement and cost-share measures with livestock and crop producers.

The Colorado River Basin Salinity Control Forum (Forum), the interstate organization responsible for coordinating the Basin states' salinity control efforts, issued its 1996 Review, "Water Quality Standards for Salinity, Colorado River System (1996 Review)" last June. The 1996 Review found that additional salinity control was necessary with normal water supply conditions two years ago to meet the numeric criteria in the water quality standards adopted by the seven Colorado River Basin states and approved by the U.S. Environmental Protection Agency. For the last three years (1994-96), funding for USDA's salinity control program has not equaled the Forum-identified funding need for the portion of the program the Federal Government has the responsibility to implement. It is essential that implemen-

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tation of Colorado River Basin salinity control efforts through EQIP be accelerated to permit the numeric criteria to be met again under average annual long-term water supply conditions, making up the shortfall. The Basin states and farmers stand ready to pay their share of the implementation costs of EQIP.

The President's proposed fiscal year 1998 budget contains funding of \$200 million for implementation of EQIP. MWD supports this level of EQIP funding. The Forum has determined that allocation of \$11 million in EQIP funds in fiscal year 1998 is needed for on-farm measures to control Colorado River salinity. This level of funding is necessary to meet the salinity control activities schedule in order to maintain the state adopted and federally approved water quality standards. MWD urges you and your Subcommittee to support full funding for EQIP as requested in the President's fiscal year 1998 budget for USDA.

WILDLIFE HABITAT INCENTIVES PROGRAM

Public Law 104-127 directed the Secretary of Agriculture, in consultation with State Technical Committees, to establish the Wildlife Habitat Incentives Program (WHIP). WHIP is a voluntary program, providing technical assistance and cost-sharing, to help landowners develop habitat on their properties that will support wetland wildlife, upland wildlife, threatened and endangered species, fisheries, and other types of wildlife. WHIP offers an opportunity to encourage development of improved wildlife habitat on eligible lands by providing assistance to landowners who wish to integrate wildlife considerations into the overall management of their operations.

WHIP cost-sharing assistance could be utilized to support ongoing interim conservation efforts both in the Bay-Delta estuary and for the Lower Colorado River Multi-Species Conservation Program. The CALFED Bay-Delta Program is a cooperative effort among state and federal agencies and the public to develop a long-term, comprehensive solution to ecosystem and water supply problems in the Bay-Delta. One of the main objectives of the CALFED Bay-Delta Program is to improve and increase aquatic, wetland and riparian habitats so that they can support sustainable populations of wildlife species, by implementing a system-wide ecosystem restoration approach. WHIP could benefit this program by providing cost-share assistance for the development of wildlife habitat on private lands in the Bay-Delta watershed.

The Lower Colorado River Multi-Species Conservation Program (LCR MSCP) is a broad-based partnership of state, federal and private entities in Arizona, California, and Nevada. Participants include water, hydroelectric power and wildlife resource management agencies, Tribal governments, and environmental organizations with interests in the Lower Colorado River. The LCR MSCP is focusing on the conservation of over 100 threatened, endangered and sensitive species and their habitats. WHIP would allow the combination of federal cost-sharing dollars and voluntary agricultural land-use practices to enhance habitat for listed and sensitive species of interest in the Lower Colorado River. This could be a valuable vehicle for gaining further agricultural support for conservation efforts and the goals of the LCR MSCP.

The President's budget requests \$30 million for WHIP for fiscal year 1998. MWD recommends that you and your Subcommittee support WHIP at the level requested in the President's fiscal year 1998 budget for USDA.

CONSERVATION RESERVE PROGRAM

Continued support for the Conservation Reserve Program (CRP) is necessary in order to build on the past successes of this USDA conservation program. Under the CRP, incentive payments are provided to producers to remove highly erodible and other environmentally sensitive land from production. This program helps protect the quality of drinking water supplies and facilitates ecosystem restoration efforts by reducing soil erosion, improving water quality, protecting wildlife habitats, and achieving other natural resource conservation measures. Enrollment of eligible agricultural lands that are located in the Bay-Delta estuary and tributary watersheds in the CRP, could provide water quality improvement benefits for this important source of drinking water. MWD urges you and your Subcommittee to support the President's budget request for the CRP of \$1.926 billion for fiscal year 1998.

WETLANDS RESERVE PROGRAM

The Wetlands Reserve Program (WRP), first authorized in 1990, is a voluntary program providing incentives to landowners for the restoration and protection of wetlands with long-term or permanent easements. Wetlands restoration provides important water quality improvement and wildlife habitat restoration benefits that are important to the Bay-Delta estuary. MWD urges you and your Subcommittee

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to support appropriation of \$164 million for the WRP in fiscal year 1998, as requested in the President's budget. Full support for the WRP is necessary to achieve the Administration's goal of enrolling an additional 212,000 acres into the program, for a cumulative enrollment of approximately 655,000 acres by the end of 1998.

INTEGRATED PEST MANAGEMENT AND RELATED PROGRAMS

The USDA's Integrated Pest Management (IPM) Initiative provides for the research and development of IPM practices and the coordinated implementation of IPM programs at the local level. The development and application of proven IPM practices offers the potential to reduce reliance on chemical pest controls and minimize the adverse water quality effects of pesticide use. Implementation of IPM programs could provide source water quality protection benefits in both the Bay-Delta estuary and the Colorado River Basin. The President's fiscal year 1998 budget includes funding for a variety of research and assistance programs contributing to the overall objectives of the IPM Initiative. MWD urges your full support for the \$249 million included in the President's fiscal year 1998 budget for IPM and related programs.

WATER AND WASTE DISPOSAL LOANS AND GRANTS

The President's fiscal year 1998 budget includes funding for a number of USDA programs that provide loan, grant and technical assistance to rural communities. Of particular interest to MWD is the Water and Waste Disposal Program. This program provides loans and grants to small rural communities for water infrastructure projects, in order to assist those communities with drinking water quality and supply problems and help them achieve compliance with federal drinking water standards. MWD requests you and your Subcommittee to support the President's request of \$1.293 billion for fiscal year 1998 for water and waste disposal loans and grants.

CONCLUSION

Thank you for your consideration of our testimony. We believe our comments emphasize the importance of continued funding for USDA's agricultural conservation programs. The USDA's conservation programs are critical for achieving Colorado River Basin salinity control objectives, as well as broader wildlife habitat restoration and source water quality protection objectives in the Colorado River Basin and the Bay-Delta estuary.

PREPARED STATEMENT OF MICHIGAN STATE UNIVERSITY

We write as citizens concerned about our country and as scientists and engineers who hope to better the lives of future generations. As our national leaders attempt to make the difficult choices necessary to bring the Federal Government back to fiscal health, we respectfully request that they not lose sight of the crucial importance of investing in our nation's future.

We call upon our Federal leaders to support legislation such as the National Research Investment Act of 1997 (S. 124—by Senators Gramm, Mack and Hutchison), which proposes to double funding for most non-defense federal R&D over the next ten years. We further request that Federal leaders begin working to accomplish this goal by increasing Federal research spending by 7 percent this year.

We and our colleagues are contributing to a time of unparalleled opportunity and scientific achievement. There are many benefits spawned by the research underway at Michigan State, much of it federally funded. A few examples:

- Basic research in chemistry led to the discovery of cisplatin, one of the most widely prescribed cancer drugs in the U.S.;
- Superconducting cyclotron technology was used in the construction of the Harper Hospital cyclotron for the treatment of cancer patients;
- Contaminant eating bacteria are being used to clean the ground water at Schoolcraft, Michigan; they have the potential of great savings in the cleanup costs for contaminated hazardous waste sites; and
- The development of faster and less costly methods of making composite materials has led to several MSU patents. These strong, light, corrosion resistant materials will greatly improve automobiles, trains, and bridges.

Our national leaders recognize the necessity of this investment. "This country must sustain world leadership in science, mathematics, and engineering if we are to meet the challenges of today * * * and of tomorrow." (President Clinton, November, 1993). Yet, despite the efforts of the Congress and the Administration to increase Federal investment in the NIH and the National Science Foundation, overall

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Federal research expenditures have fallen. "From 1992 through 1995, for the first time in 25 years, real federal spending on research declined for four straight years. If we don't restore the high priority once afforded science and technology in the federal budget and increase federal investment in research, it will be impossible to maintain the United States' position as the technological leader of the world" (Senator Phil Gramm).

We strongly believe in the need to set priorities for all national expenditures—particularly in science and engineering. We, and our national colleagues, are working hard—on campus, in our scientific societies, and as advisors to Federal agencies—to establish priorities for today's constrained funding.

But we are alarmed by the prognosis for the U.S. scientific and engineering enterprise. Even as U.S. corporations reduce their own long-term research, increasingly relying on university laboratories, we are losing many of our most promising science and engineering students. They see troubling trends in the funding of science. For example, an analysis of the President's budget by the AMS, projects further 14 percent reductions in support for R&D by fiscal year 2002. They rightly question whether they can expect a satisfactory career in science.

We recognize that the commitment to doubling Federal investment in research (and the accompanying graduate education) will not come easy and there are many competing national priorities. However, many economic studies have found substantial returns on these investments—in fact there would be few other federal investments that would return such critical dividends to the country. We shall continue contributing our expertise to discovery and education, and to assist our national leaders, in any way we can.

PREPARED STATEMENT OF THE MINOR CROP FARMER ALLIANCE

I. INTRODUCTION

The Minor Crop Farmer Alliance (Alliance) was formed in November 1991 to address legislative and administrative policies to ensure the continued availability of safe crop protection tools for minor uses.

Congress, in passing the Food Quality Protection Act (FQPA), provided for the establishment of a minor use program within the U.S. Department of Agriculture (USDA). The primary purpose of this office includes the coordination and policy oversight for specific program areas within USDA that impact minor use pest management practices (including: availability of needed tools either chemical or non-chemical alternatives, extension and outreach for educational efforts and direct coordination with other federal agencies). It was envisioned that responsibility for this program would be placed in an office having the support and authority of the highest levels of USDA.

With passage of FQPA and its major new areas of responsibility identified for USDA, the need for coordination at the Secretary's level has increased in importance. Minor crops have been identified as the "sentinel" species for implementation aspects of the new law. This has resulted in elevating anxiety to a very high level in the user community.

It is critical that the USDA step up to a more direct leadership role during implementation of FQPA to be a source of information and review on issues being discussed by the EPA. For minor use crops, including food and non-food uses such as nursery, Christmas trees, and ornamentals, this will require a shift in focus and priority within some branches of USDA.

II. ROLE OF USDA

Implementation of FIFRA

USDA has been identified in the new law as a full cooperator with EPA in the development and review of impacts in certain provisions of the new law, i.e., use information, IPM education and qualification of uses under the minor use provisions. A major leadership presence that cuts across line agencies within USDA will be required to focus the resources necessary to meet the expedited schedules for data generation and review during implementation of the law.

It is critical that USDA be at the table, providing the EPA and the FDA guidance during the implementation process on agricultural impact and possible mitigation measures. There are several activities dictated by the law requiring direct input on policy implications for potential impacts from a crop production, economic impact, and overall food production standpoint. USDA is the appropriate focal point for the collection and coordination of information review to assure accurate timely assessments.

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Implementation of Federal Food, Drug and Cosmetic Act (FFDCA) provisions

USDA's direct participation in implementation of the FFDCA amendments involve residue data collection and dietary exposure surveys in cooperation with the Food and Drug Administration (FDA) and EPA. There are also very clear indirect roles that are critically important as well. The methods and analysis of the data to support tolerances in light of the new safety requirements pose the most significant threat to the continued economical production of high dietary exposure crops. USDA must serve a pivotal role in the credible establishment of risk mitigation criteria to minimize impacts on the limited spectrum of crop production tools available to control pests and pest complexes on these crops.

With the magnitude of effort and time sensitive nature of the tolerance reevaluation process, the multiple line agencies that will need to be involved in development of data and policy direction will require Department oversight at the highest levels to assure timely intervention in the regulatory process.

Specific minor use provisions

In order to facilitate the coordination and oversight responsibilities required under FQPA related to minor uses, all efforts should be made to expedite the creation, organization and staffing of the "Minor Use Program" authorized in the FQPA. This Office or Program should reside at the Secretary level to ensure the needed coordination among agencies of the Department. In addition to the specific responsibilities spelled out in the Act (coordination of IPM research, IR-4 coordination, data development to support minor uses, and regulatory assistance for registration, tolerance establishment and reregistration activities), it is anticipated that USDA will become the focal point for many other efforts relative to pesticide use in American agriculture. It must also be a critical component in the development of policy positions relating to pesticide use practices and production technology.

The second major provision contained in Section 32 of FIFRA is the authorization of the "Most Use Pesticide Data Revolving Fund". USDA and the user community are working to better define the mechanism needed for such a fund so that appropriations can eventually be requested to establish this revolving program.

CODEX and harmonization

Many of the tolerance requirements under the FFDCA provisions of the FQPA have tremendous potential to impact both international and interstate commerce as a result of changing pest management practices dictated by shifts in availability of certain pesticides or changes in the tolerances allowed on specific crops. This area of impacts is not clearly defined at this time and will require continued monitoring by both the Agency and the impacted user community. The USDA should serve as a leader in assuring the maintenance of CODEX standards needed by minor crops involved in international trade.

III. RESOURCES

Resources will be critical to fulfill the direct and indirect responsibilities contained in the legislation. The user community is committed to work cooperatively with the Department and this Committee to assure that funds appropriated for these efforts are effectively and efficiently utilized to ensure the performance of USDA's responsibilities under this Act. Priority efforts should be directed toward creating a coordinated effort at the Secretary's level, appropriation or use of existing funds for the Minor Use Pesticide Data Revolving Fund once an adequate mechanism is established, adequate appropriations to allow the data collection of residue and dietary exposure information required under the Act, and other appropriations as necessary to fulfill the indirect responsibilities required under the Act.

IV. CONCLUSION

Therefore, the MCFA urges the Committee to: (1) direct the USDA to coordinate activities relating to the implementation of the FQPA out of the Office of the Secretary; (2) appropriate at least the \$6 million in the Department's budget request for a food consumption survey of infants and children. The MCFA also urges that the Committee support a possible reprogramming request from USDA to do some survey work in fiscal year 1997 to provide some more immediately needed data to the EPA to assist in their FQPA decisions; (3) appropriate \$10.4 million as requested in the USDA budget to continue the Pesticide Date Program (PDP); and (4) appropriate funds as requested in the USDA budget for Integrated Pest Management and Biological Control, Minor Crop Pest Management (IR-4), Pest Management Alternatives and Pesticide Impact Assessment. However, MCFA also recommends that the utilization of any such funds appropriated be coordinated by the

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Office of the Secretary to ensure that these program activities accurately reflect EPA regulatory decisions.

PREPARED STATEMENT OF THAD SHOWS, MISSISSIPPI RURAL WATER ASSOCIATION

Mr. Chairman, thank you for allowing me, as Board Member for the Mississippi Rural Water Association and representative for the over 1000 small communities with water systems in Mississippi to appear before this Committee today. In addition, I am here on behalf of the all the other State Rural Water Associations and rural water folks all over this country to thank you for the rural water and sewer grant funding program last year. These funds are being used and will be used to great advantage by many small water systems to improve the public health and strengthen local economic opportunity in rural America. Finally we want also to express our deepest appreciation for the help of the Committee in providing funding for our rural water Circuit Rider program. We are here today to request the continued support of you and the Committee for both the grant and loan funds and the Circuit Rider program funding.

Specifically, we are requesting for fiscal year 1998:

- Funding for the Rural Utility Service's Rural Community Assistance Partnership Rural Water and Waste Disposal grant program at \$800 million. The USDA's fiscal year 1998 budget request includes \$668,570,000 for the program.
- Funding for the Circuit Rider technical assistance program at \$5.5 million to fund our existing contract with RUS. The USDA's fiscal year 1998 budget request includes \$5,150,000 for the program.
- Requiring that the Fund for Rural America provide sufficient funding to Mississippi and the other state rural water associations to allow for a full-time person in each state to implement the county-by-county Water 2000 effort initiated by the state rural water associations.

Our primary reason for supporting additional funding in the water and sewer grant and loan program is that water and sewer are basic to rural public health. As environmental and health expectations rise, the need for safe drinking water and sanitary sewers has become a necessity for rural residents. Community water systems provide this service. USDA grants and loans allow rural residents to build systems and to repay the loans over an extended period. Without the current assistance from USDA, most rural residents could not initiate the construction of new systems and the expansion of existing ones. This funding allows more rural Americans to have safe water.

Mississippi would be a far different state without the water and sewer small communities grants and loans made through the program over the past 40 years. In our county alone I have witnessed the impact of new water systems on the health of our rural families. Mississippi has over 1000 small community water systems, before these systems were built many of us used marginal water supplies including partially polluted wells.

The need for grant and loan funds grows each year as the Federal government presses for higher and higher environmental standards on small water and sewer systems. The goal of USDA has always been to bring safer drinking water to rural residents. However, now EPA has strengthened its role through both the Safe Drinking Water Act (SDWA) regulations and through the deadlines for compliance with the Clean Water Act. To put it simply Mr. Chairman, federal requirements are increasing the cost of drinking water in rural America to the point that drinking water is becoming unaffordable in many rural towns.

The Congress has recognized this burden and is moving this year to remedy some of the problems caused by unfunded mandates and excessive federal regulations. This new emphasis on more responsibility and control at the local government level needs to replace the often suffocating constraints caused by the growing number of new federal requirements.

One alternative to increased federal regulations is on-site technical assistance. We believe that technical assistance operated by local governments provides more environmental benefits than increasing the size of the regulatory bureaucracy. As federal responsibilities are reordered, the rural water and sewer grant and loan program and the circuit rider water program in each state are an essential element to a return to greater local and state responsibility.

For example, in Mississippi, the Circuit Rider program assisted rural water systems with over 800 technical assistance contacts an average of 35 technical assistance contacts per month. Approximately one half of the contacts were made in response to direct calls for help from water system personnel. Circuit Riders have saved significant amounts of money for towns by preventing water loss, reducing the

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need for replacement of pipes, pumps and equipment, educating the towns on their most cost effective option to maintain compliance, and in working with systems to set adequate water rates in order to provide funds for continuous preventive maintenance. Often these savings are used to reach new customers or make improvements required by the SDWA.

During the past year, the Circuit Riders have made over 25,000 on-site types of technical assistance to rural water systems throughout America to provide hands-on help. We now know that having a national border-to-border program is having a dramatic impact on the upgrading of small water systems in those areas with the most serious water problems. It has proven to be the most important alternative to increased federal regulatory intervention in rural areas.

One issue that is of particular importance to rural water systems is the proposed reorganization of the USDA. The President's budget includes a request for funding the Circuit Rider program because we are in the middle of a five year contract for the program. As Congress moves to support more local control over governmental matters, the Circuit Rider is the first line for local self-help technical assistance. I have provided a list of all small communities assisted by Circuit Riders in Mississippi last year. We strongly urge you to make the funding for the Circuit Rider program a top priority for the USDA budget.

RURAL UTILITY SERVICE—RURAL WATER GRANTS AND LOANS

The grant and loan program is the backbone for rural public health. It is the program that small communities start with and count on in assembling financing for rural water and sewer systems. To best utilize USDA funds, small communities have gone to their state governments for help and in some cases have received new resources. However, in these and other cases it would be impossible to gain new financial support without the critical "seed money" that the USDA grant funds provide for projects in low income areas of each state. These grant funds are highly leveraged and the increase in the grant program is having a multiple impact on the improvement of small water and sewer systems throughout the nation.

This funding is vital to most small water systems because rural water districts do not have the legal standing to float bonds, levy taxes or seek other types of public financing. Private financing as a sole source has seldom been an alternative because of its high cost and consistent unavailability. With a repayment rate on USDA water and sewer loans of over 99 percent, this is the most sound government loan assistance program in the nation.

The Environmental Protection Agency (EPA) continuously cites the USDA rural water and grant loan program as the major source of funding assistance to help small rural systems meet SDWA requirements. The EPA has met with the USDA in an effort to ensure that adequate financial support is and will continue to be available to small water systems to meet additional requirements imposed by the Safe Drinking Water Act. This is of particular importance in that the cost to small water systems for SDWA compliance is estimated at \$8 billion over the next twelve years. While much of this cost will be borne by the small water system customers themselves, the USDA program is the catalyst to generate the necessary funding. In effect, we have one federal agency imposing regulatory requirements and relying on another agency (USDA) to provide funds to support compliance. It is in rural areas which the USDA grant and loan program is critical to SDWA compliance.

RURAL COMMUNITIES CAN'T ACCESS COMMERCIAL LENDING PROGRAMS

The existing rural water and sewer program is unique in its ability to reach the smallest communities who have no other source of assistance. In addition, the independent circuit rider gives these systems their own technical assistance program that is accountable only to them. RUS Water and Sewer funding is only available to communities who can't find "credit elsewhere", it is the funding of last resort only available to communities that can document hardship conditions.

This is the most important aspect of the program and it also reflects the very purpose of the federal government involvement. Most large communities can get loan funds from other sources such as bonds, commercial loans, and SRF's. The funding of last resort requirement is the fairness test at the very grassroots level. These requirements should be applicable to all funds set aside for rural water and sewer projects. This greatly reduces any "slush fund" possibility for the program.

Cities larger than 10,000 persons generally have access to the tax-exempt bond market and have a population density that makes water and sewer construction and operation economically feasible. The real problems are systems below 3,000.

For example in the CWA-SRF, small communities receive only a small portion of the funding because: (1) larger communities can more easily access loans, (2) large

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communities have engineers and resources to complete applications and administrative requirements, (3) larger communities mean fewer loans for state agencies to manage, and (4) and small communities don't have bond ratings which allow lower interest rates on bonds and other types of loans.

MAKING THE FUND FOR RURAL AMERICA WORK

The 1996 Farm Bill created a new program called the Fund for Rural America. Correspondingly the Department of Agriculture established the ambitious goal of providing community water to those rural residents not yet served by existing water systems. The core element of this strategy is to go county-by-county to work with existing water systems (which are state rural water association members) to plan for system expansion in underserved areas, and obtain funding assistance in order to implement the plans. This is important not only for public health, but to prevent EPA sanctions on these rural communities and to assure a base for future community economic stability.

With this in mind, rural water supported the "Fund for Rural America" provisions because this would include funding for a major effort to carry out the county-by-county strategy proposed by the state rural water associations. This effort would in turn result in an increase in the amount of funding from SDWA and HUD for these "unserved" areas.

We were stunned when only \$9.1 million out of the \$100 million for the Fund for Rural America was allocated to rural water and sewer; the program that has been the core for rural public health and economic stability. This year's limited funding will allow for money for a county-by-county program in only eleven states, which means there will not be a concerted national effort to move EPA funding away from big systems refinancing into solving the smallest water system public health priorities.

Our request is that the Congress consider designating \$4.5 million from the Fund for Rural America in fiscal year 1998 to carry out the county-by-county program in all states for next year. This will provide a full time person with each state rural water association who will be responsible for:

- assembling the information and support in priority areas to assure that RUS, EPA, and HUD monies better target those rural areas with the greatest need.
- reporting to RUS and Congress on the progress being made in reaching unserved areas in every rural county.
- assisting directly those communities that are most in need to secure funds, develop system plans, and start construction.

The RUS rural water and sewer grant and loan program has been the beacon that has led the way to a 90 percent reduction in the number of rural households without safe drinking water. It has been the wisdom, the common sense, and the support of Congress that has made this possible. As we close in on bringing rural water to those left behind, our state rural water associations need to be able to use their grassroots networks to direct newly available state level funding to supplement the long-term strategy and objectives of the RUS programs. There is an immediate need to go county-by-county and capture the available monies in SRF funds and HUD grant monies in order to intertwine them with the core RUS programs. We need the help of Congress to fund this program nationwide from the Fund for Rural America.

In next year's \$100 million allocation, Rural Water will urge both the USDA and Congress to use the Fund for the goal of providing community water to those rural residents not yet served by existing water systems. We feel that providing the maximum percentage of Funds for Rural America into the Rural Water programs will be the one action that moves the Agency's goal from initial effort to national impact.

PREPARED STATEMENT OF NORMA J. CURBY, VICE PRESIDENT, GENERAL MANAGER,
PHOSPHORUS AND DERIVATIVES, MONSANTO

We are writing to urge you and your colleagues on the subcommittee to support funding the Public Law 480 program in your upcoming deliberations at a level which will allow this valuable humanitarian assistance program to maintain its effectiveness.

Monsanto is a multi-faceted general chemical company whose products include a wide array of mineral-based food additives. We have production facilities or of rices in over 17 states. Monsanto has a long history of supplying mineral supplements for inclusion in many of the blended and processed foods utilized in the Public Law 480 program. In fact, Monsanto worked cooperatively with program officials in the development and testing of many of the Public Law 480 foods. Over the years, we

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have also made substantial donations of nutrients to private voluntary organizations for inclusion in foodstuffs to complement the Public Law 480 program.

Because of our long-term involvement in the Public Law 480 program, we are very concerned that recent substantial cuts in the program, if continued, will seriously undermine the ability of it to provide effective humanitarian assistance to the needy overseas. For example, the President's proposed budget, which you will be considering, projects providing a little more than 3 million metric tons of food aid in fiscal year 1998. That volume must be compared with nearly 8 million metric tons of food aid which was provided as recently as 1993. Although we recognize that the 1993 level included large donations of surplus governmental stocks which are no longer available, it is an obvious concern that such a reduction in donations will have a substantial negative impact on the future viability of the program. We believe this concern has already manifested itself since private voluntary organizations are reducing, or eliminating, programs in many areas of the world due to the cutbacks.

What is most troublesome in the President's budget is that it proposes an overall foreign aid increase of \$1.2 billion, while at the same time cutting the Public Law 480 budget by more than \$120 million. The President's proposed Public Law 480 budget of \$990 million represents a cut of more than one-third from the program's fiscal year 1994 level of \$1.55 billion. It is difficult for us to believe that world-wide humanitarian food needs have diminished to the extent suggested in the President's budget. In fact, if the United States is to maintain its longstanding role as the world's leader in providing humanitarian food aid, our recent decrease in support of assistance must be halted.

Title II of Public Law 480 is indeed the lifeblood of our humanitarian assistance program. We take some comfort in the fact that the President's budget proposes maintaining Title II funding in fiscal year 1998 at current levels. Even maintaining the status quo in Title II places this vital component of Public Law 480 at risk, especially in light of proposed cuts in the other titles which will continue to have a negative impact on programs under Title II. In light of these factors, we believe that an increase in Title II funding is justified and should be seriously considered by the Subcommittee.

It seems inherently unfair to increase the foreign aid budget while cutting humanitarian food assistance as the President's budget proposes. We would hope that during your deliberations these priorities can be rearranged so that the food aid budget, especially Title II, is adequately maintained, and hopefully increased, in order that this crucial assistance program can remain viable.

Thank you for your attention to this matter.

PREPARED STATEMENT OF GERALD L. VAP, PRESIDENT, NATIONAL ASSOCIATION OF CONSERVATION DISTRICTS

The National Association of Conservation Districts is a nonprofit, nongovernment organization that represents the nation's 2,950 conservation districts and more than 16,000 men and women who serve on their governing boards. Established under state law, conservation districts are local units of state government charged with carrying out programs for the protection and management of natural resources at the local level. Conservation districts work with nearly two-and-half million cooperating land owners and operators each year and provide assistance in managing and protecting nearly 70 percent of the private land in the contiguous United States.

For nearly sixty years, conservation districts and state conservation agencies have worked in close partnership with U.S. Department of Agriculture agencies to provide technical and financial assistance to help farmers, ranchers and other land managers preserve and protect our land and water resources. This partnership has been carried out primarily with the Natural Resources Conservation Service (NRCS), but also involves other agencies such as the Farm Services Agency and the Extension Service. The partnership bonds NRCS with local conservation districts, state conservation agencies, private land managers and others, and has evolved over the last half century to become an efficient and effective system to deliver conservation assistance to the nation's private land owners and operators.

The "Federal Agriculture Improvement and Reform Act of 1996," better known as the Farm Bill, strengthened USDA's conservation mission by expanding existing conservation programs and creating several new initiatives that significantly broaden the scope of the department's natural resource management responsibilities. Congress intended these programs to be carried out as voluntary, locally driven partnerships between land managers and the local, state and federal agencies that serve them. They represent opportunities to make tremendous progress in addressing the nation's most serious resource problems by helping land owners and operators make

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sound land management decisions. As in the past, however, adequate funding will be the key to the success of USDA's voluntary, incentive-based conservation and natural resource programs.

Conservation districts and state conservation agencies devote enormous human and financial resources to help meet the nation's conservation needs. State and local contributions to partnership conservation efforts now exceed \$700 million and 7,000 employees each year. In developing funding recommendations for specific agencies and programs, we recognize our own responsibilities to contribute a fair share of resources. Our recommendations on federal funding are based on information from our members, discussions with program managers and estimates based on workloads mandated by federal, state and local program authorities. We believe they represent the minimum levels necessary to address the most basic resource problems under the purview of USDA and its state and local partners.

NATURAL RESOURCES CONSERVATION SERVICE CONSERVATION OPERATIONS

Conservation technical assistance is the cornerstone of most NRCS activities, supporting activities such as the Farm Bill and programs to address state and local program priorities. The highest priority of the conservation partnership remains that of meeting the planning and technical assistance needs of farmers, ranchers and other land managers.

In addition, specific programs, such as the Farm Bill's conservation compliance provision, require that NRCS devote a significant amount of technical assistance to helping farmers and ranchers meet erosion control and other conservation requirements. Other Farm Bill programs such as the new Environmental Quality Incentives Program (EQIP) and the expanded Wetlands Reserve and Conservation Reserve Programs (WRP and CRP) also require considerable technical assistance resources from NRCS.

A number of other federal programs, as well as state and local programs, also utilize NRCS planning and technical assistance to address resource issues such as range and pasture management, mined-land reclamation, and urban and community conservation needs. As a result, the NRCS-state conservation agency-conservation district partnership has been stretched beyond capacity during the past several years. Surveys conducted by NACD to assess staff resources and needs at the local level show that approximately 9,000 additional field staff would be needed to implement local, state and federal conservation initiatives in which conservation districts and their partners are involved.

In fiscal 1997, we have faced a particularly serious shortfall in technical assistance as a result of actions by the Office of Management and Budget (OMB) and the restructured Farm Bill conservation programs. In crafting the fiscal 1997 appropriations bill, Congress reduced the mark for NRCS conservation technical assistance by approximately \$38 million. This action, we believe, was based on the assumption that roughly 19 percent of the \$200 million in Commodity Credit Corporation (CCC) funds for EQIP would be used for NRCS technical assistance. OMB, however, has directed that only 10 percent of EQIP funds can be used for technical assistance. The resulting \$28 million decrease in fiscal 1997 funding for technical assistance equates to 500-600 staff years that are no longer available to assist farmers, ranchers and other land users in carrying out EQIP and addressing other federal, state and local natural resource management priorities.

The 1996 Farm Bill also provided funding for CRP and WRP through the CCC—an action America's conservation districts applaud. However, it placed a cap on the amount of CCC funds that can be used for personnel and other program support activities at the fiscal year 1995 level. Since CRP and WRP were not funded through the CCC at that time, this action effectively precludes NRCS from using any CCC funds for technical assistance to implement the programs.

The combination of the OMB limitation and the CCC cap means that NRCS must shift technical assistance away from almost all other priorities to service these programs. If the situation is not corrected, in order to service these federal priorities, NRCS will have to virtually abandon its commitment to work with its state and local partners. That outcome would be particularly ironic, since the 1996 Farm Bill established in law the concept of local leadership, in concert with state and federal assistance, as the model for the delivery of conservation programs.

To correct these problems, we recommend that the committee provide additional funding to address this shortfall, or adopt language in the appropriations bill to exempt technical assistance for CCC-funded conservation programs from the CCC cap. We also recommend that the committee make clear to the administration its intent to allow adequate use of CCC funds for technical assistance for the Farm Bill programs.

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The conservation district role in delivering local, state and federal conservation programs has changed considerably in the past two decades. Today, more than 7,000 employees work for the nation's conservation districts. Still, the public's demands grow as expectations for a healthy and sustainable resource base increase. Conservation districts remain the critical link in meeting these expectations.

Under the 1996 Farm Bill's new model for local leadership in the delivery of conservation programs, conservation district responsibilities were greatly expanded. Districts are to provide the lead in setting priorities and bringing communities together in decisions concerning local needs and issues. While districts welcome this new opportunity, we also recognize that it creates new demands and challenges.

To help meet these ever-increasing demands being placed on the conservation partnership, NACD recommends that \$100 million be budgeted through the NRCS Conservation Operations account for direct grants to conservation districts. This action would help NRCS offset some of the costs of carrying out federal conservation programs and enhance conservation districts' ability to address national conservation concerns and priorities at the community level. We fully expect that state and local governments will step in and provide matching funds under grants program.

The capacity of the nation's rangeland to satisfy values and produce commodities is threatened or, in some cases, may have been lost on 233 million acres (60 percent) of U.S. rangeland because of one or more resource problems such as brush, weeds and water or wind erosion. The amount of rangeland in a deteriorating trend increased from 15 to 22 percent in 1992. About 46 percent (58 million acres) of permanent pasture needs treatment to sustain or enhance resource values and production. Noxious weeds, which often are able to rapidly invade and completely dominate even well-managed grazing lands, currently occur on more than 200 million acres of grazing land.

In many cases, technical assistance to help landowners and land managers develop and implement improved grazing management is all that is needed to solve resource problems and improve or maintain grazing land health. Preventing degradation before it occurs is extremely important on grazing lands, because once been damaged, the cost of restoring these lands can exceed its economic value.

Section 386 of the 1996 Farm Bill authorized the Secretary of Agriculture to establish a voluntary program to provide technical, educational, and related assistance to owners and managers of private grazing land. The program, to be carried out through local conservation districts, will help land owners address resource problems that cannot be solved easily by individual efforts without technical and financial assistance. To help meet this need, NACD recommends that the Conservation of Private Grazing Lands Program be funded at \$60 million as a new line-item in the NRCS budget.

In order to meet the expanded technical assistance needs of the Farm Bill programs and to maintain its commitment to the local-state-federal conservation partnership, America's conservation districts recommend a total appropriation of \$900.892 million for NRCS Conservation Operations. Of this amount, \$628.892 million should be approved directly for the conservation technical assistance.

CCC-FUNDED PROGRAMS

The 1996 Farm Bill combined the functions of the four principal USDA conservation cost-share programs: the Agriculture Conservation Program; the Great Plains Conservation Program; the Water Quality Incentives Program; and the Colorado River Basin Salinity Control Program. The new program, the Environmental Quality Incentives Program (EQIP), now constitutes a broad, multi-purpose national conservation cost-share program. NACD believes that the EQIP paradigm of locally led conservation, with leadership by conservation districts, should be adopted as the model for all USDA natural resource conservation programs. We also strongly support fully funding EQIP at \$200 million per year.

The Wetlands Reserve Program (WRP) has been extremely popular and successful in recapturing important wetland acreage previously converted to agricultural use. Conservation districts strongly support WRP as a model "landowner friendly" wetlands conservation program and recommend that it be funded at \$100 million for fiscal year 1998 to enroll 100,000 additional acres in the program. This funding level would allow for a significant expansion of the WRP and move toward meeting Congress's goal of 975,000 acres in the program by 2002.

The Conservation Reserve Program (CRP), originally enacted in the 1985 Farm Bill, has been one of the most successful natural resource conservation programs in the nation's history. The 1996 Farm Bill expanded the program's eligibility criteria to include enrollment of additional environmentally sensitive lands for water quality, wetlands conservation and wildlife habitat benefits. Existing contracts will ex-

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pire on roughly 24 million CRP acres by the end of fiscal 1997. In order to build upon the environmental investment and benefits from the CRP, NACD strongly recommends that CRP be funded at \$1.926 billion in fiscal 1998 to support full enrollment in the program. We emphatically oppose efforts to re-direct any CRP funds to address nonagricultural resource problems.

OTHER NRCS PROGRAMS

NRCS provides assistance for implementing more than 500 watershed projects that were established under Public Law 566 and other federal programs. Many of the projects, which have created an \$8.5 billion infrastructure, are nearing the end of their evaluated lives. Approximately 5,000 of the floodwater retarding structures are 30 years old and many are in need of repair, rehabilitation, replacement or decommissioning.

Over time, the areas surrounding many structures have changed, populations have grown and flood plains have been developed. In some cases, structural components and vegetated measures have deteriorated, creating potential hazards to communities and affecting quality of life and community economic stability. By the turn of the century, 2,000 existing structures will require significant work at a cost of up to \$750 million. The magnitude of the problems will increase as the infrastructure ages.

In order to meet the federal government's commitments, project sponsors in the 500 active watersheds need design and construction assistance to implement project plans. Watershed sponsors also need technical assistance for rehabilitation, upgrading to current standards or decommissioning of aging structures. In order to address these needs, NACD recommends funding for NRCS Watershed & Flood Prevention Operations be increased to \$350 million in fiscal 1998.

NACD also supports proposals for fiscal year 1997 supplemental appropriations for an additional \$161 million for NRCS's Emergency Watershed Program and \$77 million for FSA's Emergency Conservation Program address recent flooding and storm damage.

Through the Resource Conservation and Development Program (RC&D), NRCS provides needed assistance to rural communities. Resource management and rural development initiatives undertaken by local RC&D's help revitalize economically disadvantaged rural areas. For fiscal year 1998, NACD recommends an appropriation of \$48 million to fund outstanding applications for new RC&D areas. Further, America's conservation districts believe that any new funding should be directed toward expansion of the current RC&D program to meet locally identified needs. We do not, however, support the administration's proposal to use this funding to hire watershed and rangeland coordinators through RC&D's. Although funds to support watershed initiatives are critically needed, they should be provided through NRCS's existing watershed program, not the RC&D program.

Additional line-item recommendations for NRCS program funding are contained in the attached chart.

EXTENSION PROGRAMS

Several Extension Programs represent critical components are significant in USDA's natural resource management delivery system. For example, activities under the Renewable Resources Extension Act provide educational assistance to help private landowners manage their lands to meet commodity demands and needs while, at the same time, providing for the many public values associated with the forests and rangelands of our nation. Although the actual funding need for this program is roughly \$15 million, NACD recommends that at least \$4.0 million be appropriated in fiscal 1998.

OTHER

Research remains one of the key to the continued vitality of agriculture and effective management of the nation's resource base. U.S. competitiveness in world markets is contingent an aggressive research and development program for agricultural conservation and production techniques. We also recognize that conservation, environmental quality and production research needs vary across the United States. America's conservation districts support maintaining strong research programs in NRCS, the Agricultural Research Service, the Cooperative State Research, Education and Extension Service and other agencies as needed.

In addition to those outlined above, recommendations for other USDA natural resource and conservation-related programs can be found in the attached chart. Footnotes are provided to explain the need for many of these recommendations.

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We appreciate the opportunity to share our recommendations with the subcommittee.

FISCAL YEAR 1998 FEDERAL FUNDING RECOMMENDATIONS FOR CONSERVATION PROGRAMS ADMINISTERED BY USDA'S NATURAL RESOURCES CONSERVATION SERVICE

[In millions of dollars]

	Fiscal years—				
	1996 final	1997 NACD	1997 estimated	1998 admin.	1998 NACD
USDA Natural Resources Conservation Service					
Conservation operations:					
Conservation technical assistance ¹	583.63	690.00	528.892	549.241	628.892
Grants to conservation districts ¹					100.000
Grazing lands conservation ¹					60.000
Urban and community assistance ¹					20.000
Soil Surveys	76.73	77.00	76.409	82.248	77.000
Snow surveys and water forecasting	5.85	6.00	5.835	5.888	6.000
Plant materials centers	8.87	9.00	8.825	8.891	9.000
Water resources activities				76.000	
Total	629.98	782.00	619.961	722.268	900.892
Watershed surveys and planning ²	14.00	23.55	12.381		23.550
Watershed and flood prevention operations ³ ..	100.00	150.00	101.036	40.000	350.000
Resource conservation and development ⁴	29.00	38.00	29.377	47.700	48.000
Forestry incentives program	6.32	6.62	6.325	6.325	6.620
Outreach to socially disadvantaged farmers ..			1.000	5.000	5.000
Natural resources conservation foundation					1.000
CCC funded program:					
Environmental quality incentives program (EQIP)	130.00	200.00	200.000	200.000	200.000
Conservation reserve program (funded through FSA)	1,836.00	1,992.00	1,727.000	1,926.000	1,926.000
Wildlife habitat incentives program			20.000	30.000	20.000
Wetlands reserve program	77.00	93.20	117.935	163.597	100.000
Conservation farm option			2.000	15.000	15.000
Farmland protection program	15.00		2.000	18.000	18.000
Transfer of rural abandoned mine program (RAMP) funds from Interior Department trust fund		25.00			25.000
USDA Cooperative State Research, Education and Extension Service					
Research and education activities:					
Hatch Act payments (grants to states) ..	169.00	175.00	168.734	168.734	175.000
Cooperative forestry (McIntire-Stennis) ...	20.00	23.00	20.497	20.497	21.625
Special research grants ⁵	48.00	50.00	49.767	34.789	50.000
National research initiative	97.00	103.12	94.203	130.000	103.120
Rangeland research grants	0.47	1.00	0.475		1.000
Sustainable agriculture	8.00	10.00	8.000	8.000	10.000
Extension activities:					
General funds (Smith-Lever Sect. 3b & 3c)	268.00	275.00	268.493	268.493	275.000
Earmarked funds (Smith-Lever Sect. 3d):					
Water quality	11.00	11.23	10.733	9.061	11.230
Pest management	10.78	12.00	10.783	15.000	12.000
Pesticide impact assessment	3.00	3.36	3.214	3.313	3.360

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FISCAL YEAR 1998 FEDERAL FUNDING RECOMMENDATIONS FOR CONSERVATION PROGRAMS
ADMINISTERED BY USDA'S NATURAL RESOURCES CONSERVATION SERVICE—Continued

[In millions of dollars]

	Fiscal years—				
	1996 final	1997 NACD	1997 estimated	1998 admin.	1998 NACD
Renewable Resources Extension Act	3.00	6.00	3.192	.....	4.000

¹ *Conservation Technical Assistance.*—Adequate funding for NRCS Conservation Technical Assistance is NACD's highest priority. NACD is requesting \$280 million in new money for fiscal year 1998, to be allocated as follows: \$100 million for basic technical assistance (detailed justification included on p. 3); \$100 million for grants to conservation districts (detailed justification included on p. 4); \$60 million for grazing lands conservation (detailed justification included on p. 6); and \$20 million for NRCS urban and community assistance activities.

Note.—The funding resolution as adopted by the Council did not provide separate line-items for "Grants to Conservation Districts," "Grazing Lands Conservation" and "Urban & Community Assistance." These have been added to the "Conservation Operations" account based on other Council action. Although the "Conservation Technical Assistance" line-item has been reduced by \$180 million to account for these additional line-items, the "Conservation Operations Total" remains the same.

² *Watershed Surveys and Planning.*—Line item includes both Watershed Planning and River Basin Surveys and Investigations.

³ *Watershed and Flood Prevention Operations.*—Detailed justification for NACD's recommended increase of \$250 million is included on p. 5.

⁴ *Resource Conservation and Development.*—The NACD proposal for increased funding is premised on fulfilling the outstanding applications for new RC&D areas. NACD believes that the new funding should be directed towards expansion of the current RC&D program to meet locally identified needs.

⁵ *CSREES Special Research Grants.*—As authorized under Public Law 89-106, grant funding is earmarked for approximately 140 priority research and education programs in various states and regions. Of the total appropriation, NACD recommends that \$1.5 million be earmarked for the STEEP program for developing and testing practices to stem erosion in critical areas of the Palouse Region and the Pacific Northwest.

All USDA programs should utilize the existing delivery mechanisms, and our partnership, to implement conservation-related policies and/or programs. In particular, conservation districts should always be recommended for use as they were designed to be.

PREPARED STATEMENT OF KENNETH HOOD, PRESIDENT, NATIONAL ASSOCIATION OF
FARMER ELECTED COMMITTEEMEN

As the Appropriations Subcommittee considers funding for the United States Department of Agriculture, and specifically for fiscal year 1998 appropriations for the Farm Service Agency in the coming weeks, I respectfully submit this statement of concerns on behalf of our members.

In order to carry out programs mandated in the 1996 Farm Bill, additional downsizing in the Farm Service Agency delivery system will result in delays and reduced services to producers.

Therefore, the National Association of Farmer Elected Committeemen (NAFEC) urges Congress to provide adequate funding for fiscal year 1998 Salaries and Expenses for the County Office Committee (COC) system in the Farm Service Agency (FSA). Congress must provide the necessary funding to prevent FSA county office closings and county employee cut-backs and instead take the USDA program delivery system into the 21st century.

In addition, the Farm Service Agency already provides services to other organizations for which the agency bears the financial burden. Any funding decisions should look to the future of USDA and recognize the possibility of providing new services in USDA service centers.

We urge Congress to preserve current Farm Service Agency operations and prevent disruption in agency systems and operations.

Changes in farm programs will require the continued servicing of production contracts and a substantial workload for local FSA offices well beyond fiscal year 1998. For example, each time a new lease is entered into on land subject to the contract, FSA county offices must update the production contract.

Congress should provide the necessary funding for continued servicing of farm programs.

Congress should provide sufficient funding to retain the current FSA credit program. This is especially important because FSA delivers disaster loans through its credit function to help producers when natural disasters occur.

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In fiscal year 1996, loan processing activity was up substantially from fiscal year 1995 levels. Direct operating loan obligations increased 29 percent over fiscal year 1995 levels. Direct farm ownership loan obligations increased by 57 percent. Emergency loan obligations increased by 156 percent. The total number of loans processed by FSA offices increased between fiscal year 1995 and fiscal year 1996.

At the same time delinquencies in the loan portfolio have been reduced from 26 percent two years ago to 20.65 percent today and the numbers are improving. Less money is delinquent from a year ago. And more borrowers are ahead on repayment schedules. The current process has been successful.

USDA has the opportunity make use of some of the advantages of local servicing for its loan portfolio. Centralization limits customer service that is the hallmark of the field-based office structure and has costs.

Adequate funding is required to ensure the success of the Conservation Reserve Program. FSA is currently taking applications for the new CRP program contained in the 1996 Farm Bill. ASCS, and now FSA, has successfully delivered CRP for the past 11 years. It is one of the most successful conservation programs ever enacted by Congress.

FSA will also be a partner with the Natural Resource Conservation Service (NRCS) in the delivery of the Environmental Quality Incentives Program (EQIP). FSA's delivery system and administrative expertise will make EQIP successful as well.

Appropriations decisions should reflect that county FSA offices provide related services in the delivery of private crop insurance. FSA already has a proven record to deliver federal crop insurance for less cost than the Risk Management Agency. In order to provide one-stop service FSA should provide catastrophic policies to all producers. In addition, FSA can provide to all producers certain services—proving yields, lost adjustment—to assist the Risk Management Agency.

County offices have the ability and expertise to administer emergency livestock assistance and related disaster programs. Maintaining the delivery system will keep in place the ability to respond to natural disasters.

County Office Committees should retain their authority to hire County Executive Directors to provide direct accountability to taxpayers.

There currently is a direct line of authority from the Secretary to the State Executive Director, District Director, County Office Committees and County Executive Directors that assures direct accountability of activities and actions within county offices.

NAFEC believes the farmer-elected County Office Committee system can be improved and expanded to increase voting participation by under-represented farmers.

Additional funding should be made available for direct loans targeted to socially disadvantaged farmers.

There is an important role that farmer-elected County Office Committees play in the delivery of programs, providing grassroots control over program delivery at the local level and is consistent with the Vice President's National Performance Review.

Even with increased responsibilities for county office employees in farm, credit, insurance and conservation programs, the job is getting done. Shifting programs because of budget pressures to agencies and mission areas that lack experience with constituencies and delivery mechanisms may not be the answer.

Moves in program delivery responsibilities to agencies and organizations that are not accountable to the customer could be costly. The present county office system efficiently serves constituencies that have objectives and missions that are close to production agriculture.

FSA is the only USDA agency with a production agriculture focus, a historic expertise in working with a production agriculture constituency, and the only agency whose primary mission includes advocacy for farmers and ranchers.

The County Office Committee system is the only grassroots system of review and appeal. County office employees, utilizing local resources, provide real world solutions to constituent problems that often can be solved at the local level.

This foundation of experience, practicality and wisdom can be used to expand services offered by county offices.

County offices currently administer USDA functions related to production, conservation, risk management, credit and other activities. This flexible concept of multi-service delivery by local FSA county offices was the hallmark of the bipartisan Reorganization Act of 1994. We urge Congress to improve upon the service center delivery system it envisioned in 1994.

We should look at the potential for adding new services in delivery centers—servicing smart cards in federal nutrition programs, providing the leg and paper work for the agricultural census, assisting with federal emergency management applications, conducting collateral checks in credit, record-monitoring and loss adjustment

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assessments in risk management—to move the system closer to one-stop shopping that customers prefer.

FSA can be the hub of the wheel to truly have a USDA service center structure to serve all of rural America. For these reasons, we urge Congress to provide the appropriate funding for fiscal year 1998 Salaries and Expenses for the County Office Committee (COC) system in the Farm Service Agency (FSA) to get the job done.

On behalf of the dedicated people who serve on elected county and area committees, I respectfully request that this letter be included in the official record of hearings on this subject.

PREPARED STATEMENT OF ROBERT D. BROWN, PRESIDENT, WILDLIFE AND FISHERIES SCIENCES DEPARTMENT, TEXAS A&M UNIVERSITY

The National Association of University Fisheries and Wildlife Programs (NAUFWP) submits this statement on the proposed fiscal year 1998 budget for the Cooperative State Research, Education and Extension Service (CSREES), U.S. Department of Agriculture.

Members of NAUFWP include 55 Universities. We seek to enhance public understanding of the needs for improving natural resource management and to advance the science and practice of sustainable uses and management of the resource base. Our efforts focus on cooperative work with partners and customers to advance research, education and extension to benefit people and communities throughout the country.

Results from the Roper Starch fifth annual survey of adult Americans, prepared for the National Environmental Education and Training Foundation and released in December 1996, illustrate pressing needs for CSREES's research, education and extension programs. Key findings of adult views on natural resources provide an overall context in which to consider the specific figures in the President's proposed fiscal year 1998 budget. Adult Americans believe:

- Environmental resources should be conserved in ways that balance economic growth while protecting the environment and human health;
- Natural resources can be managed in ways that protect wildlife and ecosystems while humans benefit from their planned use;
- Federal government spending should be shifted to environmental programs from other areas; and
- Concerns for the environment and management of natural resources can be responded to by expanding education programs designed to raise current low levels of knowledge about the environment, such as to maintain and improve water quality.

Within this context of public views and needs for research, education and extension, the NAUFWP supports continuing and strengthening CSREES programs. The NAUFWP requests and urges that some adjustments be incorporated in the proposed fiscal year 1998 budget to be more responsive to needs of the public and resource managers. Specifically, it recommends that funds for four items in the proposed budget be increased.

- \$9.5 million be provided for the Renewable Resources Extension Act (RREA).

This important program should be strengthened, not eliminated as proposed in the President's draft budget. It should be continued to improve the management and production of natural resources, to enhance the economic viability of natural resource enterprises, and to maintain and restore natural resources on a sustainable basis. The fact that cooperators provide about \$4 for each \$1 of federal funds demonstrates the broad acceptance of this essential program in meeting pressing public and management needs. By providing information and motivating individuals, extension personnel can assist those whose actions affect the resource base. Advances can be registered in improving management of natural resources, as the poll findings cited above clearly show citizens want. Continuing the RREA on a reasonable level will help ensure the flow of essential information to private landowners for building more effective programs.

- \$10,773,000 be provided for water quality extension activities, not a decrease, as carried in the President's proposed fiscal year 1998 budget. Broad public concern over water quality issues and the need to improve management to restore and maintain water quality justify increased funding for this extension activity.
- \$500,000 be provided for Rangeland Research Grants, not zero as proposed in the President's fiscal year 1998 budget. The practical and applied problems addressed through this grant program need attention and definitely should be continued. More than half of the U.S. land area is rangeland. Elimination of the only national competitive grant program for rangelands has very serious impli-

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cations for watersheds, wildlife, fish and other natural resources, as well as the agricultural interests and economy. A recent study shows that modest funds for rangeland research supported some of the most important studies on rangelands conducted in the past decade. Wildlife issues on rangelands will involve some of the more important problems in the next decade and require prompt study to provide practical solutions.

—\$283,260,000 be provided for the Smith-Lever Formula extension program. These block-grant type funds for land grant universities permit educational outreach to help meet local and state needs. Not less than 35 percent of this increase over fiscal year 1997 should be applied to Extension's Environmental Stewardship Education Programs, which are very relevant to the Nation's natural resource management challenges and needs. These funds will enable the programs to develop the critical mass of expertise at state and local levels to address important existing and emerging natural resource and environmental issues directly affecting rural and urban communities nationwide.

With the above four adjustments to provide more reasonable levels of funds to help meet pressing needs of citizens and resource managers, the NAUFWP is pleased to see increases carried in the proposed budget for:

—The national research initiative competitive grants program; and
—Pest management. Assuming the \$4,217,000 increase carried in the President's fiscal year 1998 budget is approved, the NAUFWP recommends that not less than 25 percent of the total appropriation for pest management be dedicated to educational programs to address wildlife damage management and noxious weed problems on rangelands. Needs are increasing for managing certain plants and animals that become pests in given situations.

The NAUFWP recognizes that programs of the CSREES and its Land Grant partners stimulate relevant, positive changes in acceptance and implementations of new technologies and management approaches by private landowners, resource managers, community decision makers and others in the public sector. Significant benefits accrue to individuals, communities, states and the nation through building and sustaining a more viable and productive natural resource base, and competitive and profitable agriculture and other activities. Demands for CSREES are heavy and expected to increase as citizens seek information to help resolve their environmental concerns and improve management of the resource base. For example, enrollment in extension 4-H youth natural resource programs and projects continue strong, with more than 1,350,000 young people now enrolled from both urban and rural communities across the country.

With deep concerns of adults over resource management and pressing needs to strengthen research, education and extension programs, the NAUFWP recommends the adjustments described above for the proposed fiscal year 1998 budget. Incorporating those adjustments yields the following figures.

—\$402,342,000 for research activities, including: \$221,741,000 for base programs (Hatch Act, McIntire-Stennis, Evans-Allen and Animal Health and Disease (Section 1433)); \$34,789,000 for special research grants; \$130,000,000 for National Research Initiative competitive grants; and \$15,812,000 for additional important research, including rangeland research and sustainable agriculture.

—\$20,500,000 for higher education, including fellowships, and challenge and partnership grants.

—\$443,750,000 for extension activities, including \$283,260,000 for Smith-Lever formula funds.

These funding levels would help respond to current public needs and legal responsibilities, and assist in carrying out programs more effectively. The NAUFWP requests that the Appropriations Committee approve these adjusted figures.

PREPARED STATEMENT OF JOHN M. WHITE, CHAIRMAN, 1998 ACADEMIC PROGRAMS SECTION, BUDGET COMMITTEE, BOARD ON AGRICULTURE, NATIONAL ASSOCIATION OF STATE UNIVERSITIES AND LAND-GRANT COLLEGES

Mr. Chairman, members and staff of the Subcommittee, I appreciate the opportunity to address the important issue of science education in the United States and the 1998 budget for the USDA. Few issues are of more importance to the well being of our country and the future of our food and agriculture system.

Over the last five years, three White House reports and three presidential administrations have called for more emphasis by federal agencies on undergraduate education and K through twelve science education. The most recent call was made by President Clinton in his State of the Union message February 4, 1997.

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Federal agency involvement with higher education is especially critical to American agriculture. The great size of the American food and agricultural system and its very favorable competitive position in the world economy is due in large measure to our ability to substitute scientific knowledge for natural resources and labor. Theodore Schultz, using agriculture as his model, won the Nobel Prize in economics for demonstrating that the return on human capital was much higher than the return on physical capital.

This year the Board on Agriculture Budget Committee of the National Association of State Universities and Land-Grant Colleges carefully constructed a list of priorities for funding of USDA programs in research, education, and extension. Pre-eminent in this list was the Higher Education Challenge Grants Program administered by the Science and Education Resources Development unit of the Cooperative State Research, Education, and Extension Service.

- This program is a matching program, generating dollar-for-dollar non-federal funds, thereby doubling the federal investment.
- It is a highly competitive program, assuring only the most appropriate, highest quality projects will receive funding.
- It supports innovative and model projects that can and are transferred to other campuses throughout the system.
- It promotes partnerships among universities and colleges as well as with private industry.
- It promotes faculty development in order to be better able to serve student educational needs in the biological and social science area.
- The program allows us to enrich curricula to meet needs of potential scientists, technicians, and the future informed non-science citizens.

A multitude of outstanding examples of successful Challenge Grants can be cited, however noting but two illustrates the innovative nature and important role these grants play in our agriculture and natural resource system.

- New Mexico State University.—Enhancing Faculty Capacity to Internationalize Professional Agriculture Curricula
- Mississippi State University.—A World Wide Web Hypermedia Textbook for Improving Instruction in Agriculture

Present funding for this Higher Education Challenge Grants Program is \$4.35 million. The Academic Programs Section and the Board on Agriculture Budget Committee of NASULGC recommend funding for 1997 of \$5.350 million. This modest increase will allow the agency to award larger grants, which will encourage cooperative grant proposals from participating schools. Presently the percentage of submitted proposals funded is only 19 percent.

The Challenge Grants Program is the cornerstone of the higher education effort of the USDA. This program complements and enhances the successful efforts of the 1890 Capacity Building Program and the new programs for the 1994 land-grant institutions.

The very successful Institution Capacity Building Grants Program for 1890 Institutions strengthens the linkages among historically minority institutions and other colleges and universities, the U.S. Department of Agriculture, and private industry. This program is presently funded at \$9.2 million. The Academic Programs Section and the Board on Agriculture Budget Committee recommended 1997 funding at \$10 million. Building and enhancing the capacity of the 1890 institutions to educate undergraduates in agriculture and natural resources provides a sound base from which these institutions can enrich their programs through the Higher Education Challenge Grants Program.

Similarly, the 1994 land-grant institutions are building and enlarging their capacity to educate Native American students in agriculture and natural resources, primarily through the 1994 Education Equity Grants Program and the interest from the Native American endowment fund. In addition, the 1994 land-grant institutions have authorization for a \$1.7 million Capacity Building Grants Program to further develop their educational capacity and encourage cooperation with 1862 and 1890 institutions. These programs, aimed at substantially improving educational efforts of the 1994 institutions many, of which are only 20 years old and all with a scarce resource base, complement perfectly the Higher Education Challenge Grants Program. The Higher Education Challenge Grants build upon the educational foundation provided by the 1994 Education Equity Program, endowment, and Capacity Building Programs. The Academic Programs Section and the Board on Agriculture 1997 Budget Committee recommend full funding for all of these necessary programs.

Another cornerstone of this educational effort is the Multicultural Scholars Program. This program allows institutions to encourage a variety of educationally outstanding minority students to enter the field of agriculture and natural resources. Again, it further extends the cooperation between 1862, 1890, and 1994 land-grant

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institutions. Presently the program is funded at \$1 million with funds carried over to allow for a \$2 million program every other year. We recommend funding for this important program at \$2 million for 1997.

The Graduate Training Fellowships is the only federal program targeted specifically to the recruitment and education of pre-doctoral students for critical food and agricultural science positions in areas identified as having a shortage of expertise. The Academic Programs Section and the Board on Agriculture Budget Committee recommend funding at \$4 million.

The above-mentioned programs have been extensively reviewed by the USDA-land-grant partnership members and have received a high priority ranking by both the Academic Programs Section and the Board on Agriculture of the National Association of State Universities and Land-Grant Colleges.

We appreciate the opportunity to submit this testimony and encourage your positive response to these prioritized requests.

PREPARED STATEMENT OF DR. DARYL B. LUND, CHAIR, FISCAL YEAR 1998 COMMITTEE, BOARD ON AGRICULTURE, NATIONAL ASSOCIATION OF STATE UNIVERSITIES AND LAND-GRANT COLLEGES, AND DEAN, COLLEGE OF AGRICULTURE AND LIFE SCIENCES AT CORNELL UNIVERSITY

INTRODUCTION

Mr. Chairman and members of the Subcommittee. I am Daryl Lund, Dean of the College of Agriculture and Life Sciences at Cornell University. I also serve as chair of the fiscal year 1998 Budget Committee of the NASULGC Board on Agriculture. My colleagues and I are grateful for the support the land-grant university system has received from this Subcommittee in the past. I appreciate the opportunity to come before you to speak on behalf of the land-grant system for continued federal investment in the teaching, research, and extension programs at our institutions. Before I present our priorities and budget recommendations for fiscal year 1998, I would like to comment briefly on the unique land-grant partnership that works with and for people, families and communities, for production agriculture and food systems, for the food and fiber precious to our health and our economy and for the environment and natural resources for which we are stewards.

FROM VISION TO REALITY—THE LAND-GRANT SYSTEM: DURABLE, RESPONSIVE AND ACCOUNTABLE

A bold new federal and state partnership was begun on July 2, 1862, when President Abraham Lincoln signed visionary legislation to provide grants of land to states for the endowment, support and maintenance of colleges of agriculture and mechanical arts

This far-reaching step was followed in 1887 by the Hatch Act which created the State Agricultural Experiment Station system and in 1914 by the Smith-Lever Act which set up the State Cooperative Extension Service. Thus, the federal/state/local industry partnership that we now know as the land-grant system was established to provide all Americans access to teaching, research and extension. The system depends, for its effectiveness, on the unique partnership of the federal government with state and local governments and the private sector. The system was enhanced in 1890 when Congress passed legislation to endow seventeen predominately black colleges and, more recently, in 1994 when Congress added twenty-nine Native American colleges to the land-grant family.

That unique partnership created by those nineteenth-century visionaries has demonstrated its lasting value and promises continued effectiveness far into the next century. A key benefit of this democratic participatory concept has to do with accountability. A variety of concerned participants ensures that projects meet clientele needs in accordance with mutually formulated work plans and projected outcomes. The land-grant systems superb accountability has earned it the public's trust.

THE ULTIMATE BENEFICIARY OF OUR SUCCESS IS EVERY AMERICAN CITIZEN

Thanks in part to America's public investment in the federal/state partnership programs of education, research and extension, agriculture is one of this nation's greatest success stories; the return on that public investment and the resulting benefits to the American consumer have been remarkable.

Every year, U.S. consumers save approximately \$200 billion because they pay 2.3 times less for food and fiber than they would have if technology had halted at 1950 levels. The U.S. food supply is the safest and most affordable on the planet. There is a measured rate of return in the overall investment in research, education and

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extension of between 30 and 50 percent, depending on location and commodity. The social changes accrued by the American public are no less important. The Cooperative Extension nutrition education program has assisted thousands of low income families improve their diet and health, thereby saving millions of dollars in health care.

4-H is the largest youth-serving, non-formal educational program in the nation, reaching 5.5 million young people across the nation—rural, small town, suburban and urban settings—and across all racial ethnic and economic groups.

Technology, along with improved farming practices, has also reduced soil erosion by a factor of six over erosion rates of the 1930's. And, a too-often forgotten fact is the extent to which the American food and agriculture sector contributes to the nations wealth. Agricultural technology has reduced by 393 million acres the prime farmland required to meet the nations needs for food production. Output has doubled since 1950 to over one trillion dollars, which represent 16 percent of the national economy and the industry accounts for 11 percent of the total value added segment of the U.S. economy. The industry accounts for over 23 million jobs or almost 20 percent of the total work force.

Agriculture and society always have been inseparable. In fact, agriculture is a key foundation for society. And the centrality of agriculture is no different today—but it includes food, fiber, natural resources, and environmental stewardship.

All Americans have a strong expectation to eat every day, three times a day. Fortunately, American agriculture provides the safest, most abundant, most affordable food and fiber supply the world has ever known. In addition to providing our critical food supply every day for everybody, American agriculture acts as environmental steward to 400 million acres of farmland, 500 million acres of forest land and 390 million acres of rangeland. American agriculture is literally us, our land, our food and fiber, our environment, our people. Eleven percent of our wages, salaries, proprietor income, rents and profit is contributed by food and agricultural enterprises. Almost 20 percent of American workers earn a paycheck in agricultural and food enterprises. Meanwhile, as Americans we spend 11 percent of our disposable income on food, far less than Canadian, French, Australian and Japanese consumers. Improved international trade conditions in the 1990's have resulted in increased exports, resulting in a \$60 billion positive balance of trade in agriculture. Agricultural exports in 1994 were responsible for about 790,000 jobs in the United States, including 260,000 in rural areas.

Better nutrition is the result of better nutrition education. Because of our efforts in agricultural research and education, Americans understand more about nutrition and are healthier for it. Increasingly sophisticated computers coupled with highly trained agriculturalists will provide American agriculture with access to information on global weather, marketing and changes in consumer tastes and dietary habits, resulting in increasing efficiency, high-quality products and lower consumer costs. Precision farming will become routine. Sophisticated machinery for variable rate application of nutrients, yield monitors to track crop yields and sophisticated field mapping using satellite technology will further enhance our environmental stewardship.

Just around the corner are more biopesticides, industrial-use crops, a multitude of new and improved food products—and as you have heard recently, genetic cloning of animals, all of which will address the tripartite necessity for convenience, cost and healthfulness. Increasingly, the future of America's agriculture will depend on a high-quality research and education system.

THE PARTNERSHIP AND U.S. AGRICULTURE IN THE GLOBAL MARKETPLACE

Through its positive trade balance, the U.S. agricultural sector significantly helps to offset the large U.S. non-agricultural trade deficit. In addition, agricultural exports stimulate further income and growth in the domestic economy outside the agricultural sector.

However, the competitive position that the U.S. now holds in international markets is a concern. Growth of the U.S. agricultural sector has fallen behind that of other nations. The dominance the U.S. once enjoyed as an abundant supplier of low-cost commodities may no longer hold true. Other countries have begun to catch up and in some cases surpass U.S. agricultural productivity growth in certain areas and the result is a weaker competitive position. In fact, the global share of U.S. agricultural exports has slipped in the past ten years.

As we approach full implementation of international free trade agreements such as GATT and NAFTA, continued growth in the U.S. agricultural sector is vital to maintaining a strong competitive position in the global marketplace. Without expanded research and development efforts, the U.S. may continue to sacrifice its posi-

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tion in global markets and profitability in the total agriculture sector. The U.S. should not allow this to happen.

If the agricultural sector of the economy is not competitive in the global market, we will lose our ability to provide the most inexpensive and safe food supply the world has ever known. We will be subject to food and fiber from countries with their standards, not ours. We will lose diversity, food safety will always be at risk and costs will rapidly escalate. We will be vulnerable to shortages, and our lifestyle will change as a proportionately larger amount of our disposable income would be directed to food, clothing and other consumables attributable to agriculture.

The responsive, adaptable and efficient integrated partnerships which have served domestic agriculture so well for decades must now be expanded and enhanced in order to assist U.S. agriculture in sustaining its international competitiveness and to ensure significant future gains.

FISCAL YEAR 1998 BUDGET PRIORITIES

Funding for research extension and education programs

The fiscal year 1998 budget priorities were identified through a process of nationwide consultation with the land-grant community, farmers and agribusiness persons, consumers, industry, individuals and families, as well as local community leaders.

There are two crosscutting priorities that define the NASULGC fiscal year 1998 budget recommendations:

- Strengthen base funds in agricultural research, extension and higher education programs
- Targeted funds which advance special initiatives in support of the food, agriculture and environmental system

BASE FUNDS: THE HEART OF THE SYSTEM

Base funds for research are appropriated under Hatch McIntire-Stennis, Evans-Allen, and Animal Health legislation; Extension base funds are appropriated under Smith-Lever 3b and 3c, D.C., and 1890 Colleges and Tuskegee Extension Acts.

Base funds create a unique partnership between the United States Department of Agriculture (USDA), the state land-grant universities and county governments, which has ensured a profitable and successful food and agriculture industry.

BASE FUNDS

Provide the infrastructure for long-term research and extension programs.

Rapidly and effectively address problems that arise for producers and customers.

Facilitate the network or national system of different institutions working together on broader needs, challenges and concerns of all citizens.

Leverage greater outside support for programs (approximately \$4 for every base \$1).

Base funds represent the federal portion of the ongoing state/federal partnership that helps provide stable and ongoing mission-oriented research and education programs to support the agricultural sector of each state. These resources represent a long-term commitment to U.S. agricultural research and technology transfer and are absolutely essential for leveraging external resources for enhanced agricultural systems. Base funds provide a balanced portfolio to assure that long-term research and extension programs remain viable. Base funds make it possible to develop and support working teams over time while competitive grants typically last only for two or three years. It is not efficient nor is it reasonable to mount long-term projects solely on the basis of short-term competitive grant funding mechanisms.

Base funds assure that resources are available to address specific and unpredicted problems, many of which are applied science issues that need to be addressed but would not likely be funded through a competitive grant process. While competitive grant programs tend to focus on new discoveries, base funding transfers these discoveries to agricultural products and applications. Erosion of base funds over the past two decades has impaired the ability of the system to meet critical state and national research and extension needs. Major redirection of these funds to focus on contemporary issues already has occurred at most land-grant universities. Many universities have been forced to reduce their faculty and Extension staff at a time when the needs for science-based research and Extension programs have escalated dramatically. Reversal of this erosion in base funding is essential to maintain the basic infrastructure for research and extension.

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An increase of 5.5 percent in base funds for research extension, and education is needed to rebuild capacity after nearly a 20 percent decline in real funding levels since 1980.

TARGETED FUNDS

Targeted funds address specific issue areas such as food safety, water quality, youth and families at risk or other specific problems like the outbreak of new wheat diseases which could significantly affect food production and farm gate as well as consumer prices. Even during times of fiscal restraint, public investments are needed to assure the continuation of a dynamic food, agriculture and environmental system of research, extension and instruction which anticipates information needs on a global scale while maintaining a sound base from which to respond.

Assessing need and changing focus require special research and extension initiatives such as the National Research Initiative and programs on water quality, youth-at-risk, food safety and sustainable agriculture. Base funding sustains the infrastructure of information, expertise and facilities from which new initiatives emanate, but each requires funding to advance a competitive U.S. agriculture, food and environmental system.

We recognize the serious budget restrictions faced by the Congress this year and we have tried to be reasonable in our request. We do feel, however, that several high-priority areas deserve special attention because of their impact on contemporary societal concerns and U.S. competitiveness in global agriculture. The high-priority areas include:

- Integrated Pest Management
- Institution Challenge Grants
- 1890 Capacity Building
- Children, Youth and Families at Risk
- Sustainable Agriculture
- Water Quality
- Food Safety and Health
- Managing Change
- Native American Education in Agriculture and Natural Resources

The NASULGC Board on Agriculture strongly supports the education programs at all of our schools including the 1862, 1890, and 1994 institutions which are enriched and improved through the higher education and challenge capacity building grants programs of the Cooperative State Research, Education, and Extension Service (CSREES).

The land-grant community urges full funding for the authorized amount of \$100 million for the Fund for Rural America and retain the original intent of the legislation for the use of these funds. We are encouraging this because of the transition occurring in agriculture due to the changes in the national farm policy enacted by Congress.

CONCLUSION

Mr. Chairman, distinguished citizens representing all phases of the land-grant system have worked diligently to prepare what we feel are reasonable yet effective budget recommendations for fiscal year 1998. These recommendations address critical national priorities and they provide solutions to important problems in agricultural production, environmental and natural resource stewardship, rural social and economic welfare, and the global competitiveness of U.S. agriculture.

Mr. Chairman, I appreciate the opportunity to present this budget and its rationale on behalf of the Board on Agriculture of NASULGC. On behalf of all the land-grant universities in the United States, I respectfully request that you accept for the record our Science and Education budget recommendations for fiscal year 1998, which are attached to my statement. Thank you.

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TABLE 1.—SUMMARY OF FUNDING RECOMMENDATIONS FOR RESEARCH, EXTENSION AND HIGHER EDUCATION

[In thousands of dollars]

	Fiscal years—		
	1997 Appropriations	1998 President's request	1998 NASULGC recommendation
Base programs:			
Research:	221,741	221,741	233,939
Extension	293,583	293,583	309,730
Total	515,324	515,324	543,669
Special programs:			
Research:			
NRI	94,203	130,000	113,500
Special grants	20,044	32,289	49,174
Special problem grants, regional/state	29,723	.....	.....
Other research grants	13,625	12,650	14,225
Total	157,595	174,939	176,899
Extension:			
National priorities	25,961	28,435	30,798
Specified programs	94,663	90,637	106,091
Total	120,624	119,072	136,889
Higher education: National needs grants	20,150	20,500	26,000
Total	20,150	20,500	26,000
Federal administration:			
Net research	10,249	2,662	2,662
Net extension	12,066	5,156	5,102
Total net	22,315	7,818	7,764
Summary:			
Total Research	389,585	399,342	413,500
Total extension	426,273	417,811	451,721
Total higher education	20,150	20,500	26,000
Grand total	836,008	837,653	891,221

TABLE 2.—RESEARCH FUNDS

[In thousands of dollars]

	Fiscal years—		
	1997 Appropriations	1998 President's request	1998 NASULGC recommendation
Base programs:			
Hatch Act (17) ¹	168,734	168,734	178,015
McIntire-Stennis (18)	20,497	20,497	21,625
Evans-Allen (1890) (19)	27,735	27,735	29,261

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TABLE 2.—RESEARCH FUNDS—Continued

[In thousands of dollars]

	Fiscal years—		
	1997 Appropriations	1998 President's request	1998 NASULGC recommendation
Animal health (19)	4,775	4,775	5,038
Total base programs research	221,741	221,741	233,939
Research grants—Public Law 89–106			
Competitive Grants (sec. 2b)(NRI):			
Plant Systems (20)	36,044	47,000	39,000
Animal systems (20)	23,104	29,500	25,500
Nutrition, food quality and health (20)	7,209	11,000	10,000
Natural resources and environment (20)	17,194	27,000	22,000
Processing for adding value/new products develop- ment (20)	6,755	9,000	9,000
Markets, trade and rural development (21)	3,897	6,500	8,000
Subtotal competitive grants	94,203	130,000	113,500
Special research grants (sec. 2c):			
National programs:			
Managing change in agriculture/integrated animal systems (21)			2,000
Food safety (21)		2,000	3,000
Pest control strategies (21)			
Critical issues (21)	200	200	200
Expert IPM decision support system (21)	177	300	300
Pest management alternatives (21)	1,623	4,200	4,200
Integrated pest management/biocontrol (22) ..	2,731	8,000	11,000
Pesticide clearance (22)	5,711	10,711	10,711
Pesticide impact assessment (22)	1,327	1,327	1,327
Minor use animal drugs (23)	550	550	550
Biological impact assessment (23)	254	254	
Rural development centers/communities in eco. transition (23)	423	423	1,595
Tropical and subtropical ag. (23)	2,724		2,724
Water quality (23)	2,757	2,757	4,500
Global change (23)	1,567	1,567	2,567
Rural economic and social development (1890) (24) ¹			2,000
Soil quality initiative (24)			2,500
Subtotal national special grants	20,044	32,289	49,174
Subtotal regional/state special grants (25)	29,723		
Total special grants	49,767	32,289	49,174
Grand total research grants	143,970	162,289	162,674
Other research programs:			
Rangeland (25) ¹	475		1,475
Aquaculture centers (26)	4,000	4,000	4,000
Supplemental and alternative crops (26)	650	650	650

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TABLE 2.—RESEARCH FUNDS—Continued

[In thousands of dollars]

	Fiscal years—		
	1997 Appropriations	1998 President's request	1998 NASULGC recommendation
Sustainable agriculture systems (27)	8,000	8,000	8,100
Critical materials	500	.....	.....
Total other research programs	13,625	12,650	14,225
Federal administration: Direct	10,249	2,662	2,662
Total Federal administration ² (27)	10,249	2,662	2,662
Grand total research	389,585	399,342	413,500

¹ Indicates the page on which the program description appears.

² Funding for the Pacific Rim Program is included in Federal Administration.

TABLE 3.—EXTENSION FUNDS

[In thousands of dollars]

	Fiscal years—		
	1997 Appropriations	1998 President's request	1998 NASULGC recommendation
Base programs:			
Smith-Lever 3b & 3c (28) ¹	268,493	268,493	283,260
1890 Colleges and Tuskegee (29)	25,090	25,090	26,470
Total base programs extension	293,583	293,583	309,730
National extension priorities:			
Water quality (29)	10,733	9,061	10,733
Food safety and quality (29)	2,365	4,365	4,365
Sustainable ag. systems (29)	3,309	3,309	4,000
Children, youth and families at risk (30)	9,554	11,700	11,700
Total national extension priorities	25,961	28,435	30,798
Specified programs:			
EFNEP (30)	58,695	58,695	60,000
Rural development centers/communities in transition (31)	908	908	1,000
Integrated pest management (31)	10,783	15,000	15,000
Pesticide impact assessment (31)	3,214	3,313	3,300
Pesticide applicator training (31) .....	.....	1,500	1,500
Farm safety/agrability (31)	2,885	.....	2,855
Reservation extension agents (32)	1,672	1,672	1,724
1890 extension and research facilities (33)	7,549	7,549	7,549
Renewable Resources Extension Act ² (32)	3,192	.....	3,368
Agriculture telecommunications (33)	1,167	.....	1,167
Rural health and safety education (33)	2,628	.....	2,628
Extension services at the 1994 institutions (34)	2,000	2,000	2,000
Managing change in agriculture (34)	4,000
Total specified programs	94,663	90,637	106,091

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TABLE 3.—EXTENSION FUNDS—Continued
[In thousands of dollars]

	Fiscal years—		
	1997 Appropriations	1998 President's request	1998 NASULGC recommendation
Federal administration: Direct	12,066	5,156	5,102
Net Federal administration (34)	12,066	5,156	5,102
Grand total extension	426,273	417,811	451,721

¹ Indicates page on which the program description appears.

TABLE 4.—HIGHER EDUCATION FUNDS
[In thousands of dollars]

	Fiscal years—		
	1997 Appropriations	1998 President's request	1998 NASULGC recommendation
National needs competitive grants:			
Institution challenge grants (41) ¹	4,000	4,350	5,350
Multicultural scholars program (42)	1,000	1,000	2,000
1890 Capacity building grants (43)	9,200	9,200	10,000
Hispanic education partnership grants (43)	1,500	1,500	1,500
1994 Institutions capacity building ² (43)			1,700
1994 Education equity grants (44)	1,450	1,450	1,450
Graduate training fellowships (43)	3,000	3,000	4,000
Grand total higher education	20,150	20,500	26,000
Native American endowment fund ²	4,600	4,600	4,600

¹ Indicates page on which program description appears.

² The Endowment Funds are not included in the total appropriation.

PREPARED STATEMENT OF DR. THOMAS L. PAYNE, DIRECTOR, AGRICULTURAL
RESEARCH AND DEVELOPMENT CENTER, OHIO STATE UNIVERSITY

The State Agricultural Experiment Station System, representing fifty-nine State and Territorial Experiment Stations, sixty-three Schools and Colleges of Forestry, seventeen 1890 Land-Grant Institutions and Tuskegee University, twenty-seven Colleges of Veterinary Medicine and forty-two Schools and Colleges of Home Economics, is appreciative of the opportunity to present this testimony for the fiscal year 1998 Budget Committee of the Board on Agriculture of the National Association of State Universities and Land-Grant Colleges.

The fiscal year 1998 budget request for research was developed with great sensitivity to the fiscal constraints being felt at the national level while, at the same time, focusing on the responsibilities of the state partners to assist and support the food and fiber systems of the nation. These systems face challenges unparalleled in our nation's history. The realities of NAFTA and GATT coupled with proposed changes in farm programs are creating an environment of revolutionary, not evolutionary, change in American agriculture. The products of research, including new and innovative technologies, are needed more than ever before. These research products must reduce economic and environmental risks, improve competitiveness in the international marketplace, develop ways to add value to raw agricultural products, maintain and enhance a safe and nutritious food supply, and increase that food supply to meet the demands of our ever-increasing human population around the world.

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We have limited our request for increases in funding to a few critical areas, held many program requests at the fiscal year 1997 funding levels and reduced or even eliminated some programs which, while important, may be addressed in other ways.

The fiscal year 1998 request for research represents an overall increase of 6.1 percent above fiscal year 1997 funding levels with the following critical areas targeted for increases:

- Base Programs
- The National Research Initiative
- Managing Change
- Food Safety
- Pest Management Control Strategies (IPM) with a focus on:
 - Pest Management Alternatives and Critical Issues
 - IPM/Biocontrol
 - Pesticide Clearance
- Soil Quality Initiative
- Water Quality Initiative

Our budget request includes a 5.5 percent increase in base programs. Base programs form the foundation on which all of our research efforts are built. This priority has broad-based support from the customers of the system and the research conducted under these programs undergoes review by scientists and administrators. And very importantly, the research priorities are determined based on input from customers at the local, state and national level.

The National Research Initiative continues to be a high priority as we ask for your support in reaching the authorization level of funding. In recognition of fiscal restraints, our request this year is the same as requested in fiscal year 1997. This is in order to reinforce the critical nature of this research.

We request increases in the Pest Management Control Strategies categories to support the USDA IPM initiative that has as its goal farmer implemented IPM methods on 75 percent of total crop acreage by the year 2000. These programs identify the Land Grant university system, both research and extension, as major entities in the development and implementation of this program. IPM places emphasis at the regional and local levels with major involvement of producers and private industry to set the priorities for research and technology transfer.

We request support for a new research initiative on soil Quality at a level of \$3.0 million. This initiative is proposed in support of efforts toward whole farm and ecosystem level planning. Understanding of the role of soil in forest, range, and pasture, crop and wetland ecosystems is critical in the development of management plans on these lands. Currently, resources are not available to conduct the needed research.

This budget was developed with our USDA partners and reflects recommendations of a system-wide joint planning effort. The research planning process, leading to the development of the research budget, involved more than 200 "Customer Input Groups" including commodity and farm organizations, professional and scientific societies, institutes, foundations and councils (both public and private), and policy makers. Research partners included USDA/Cooperative State Research, Extension, and Education Service, USDA/Agricultural Research Service, and Schools and Colleges of Veterinary Medicine, Forestry, and Home Economics.

The Federal/State partnership through the combination of research programs in this budget proposal, when coupled with state and non-federal support, continues to provide the flexibility to address a wide array of issues and has resulted in the high rate of return on public investment in agricultural research ranging from 30 to 65 percent. These data are based on independent studies of return on investment in agricultural research and development. Research programs of the Agricultural Experiment Station System perform approximately 68 percent of all public funded agricultural research in support of the \$600 billion agricultural industry. The federal investment represented in this budget is leveraged by approximately \$1.5 billion in state and non-federal funds.

Thank you for the opportunity to provide this testimony on behalf of the Board on Agriculture of the National Association of State Universities and Land-Grant Colleges. The 108-year partnership of state and federal research, along with the support of Congress, will continue to meet the challenges of the future and create opportunities for agriculture. I strongly encourage you to consider and adopt this budget recommendation. Your continued support is appreciated and we are committed to continue playing a major role in sustaining a strong agriculture for the benefit of all citizens of this country and people of the world.

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PREPARED STATEMENT OF WILLIAM B. LACY, DIRECTOR, COOPERATIVE EXTENSION SYSTEM AT CORNELL UNIVERSITY

Mr. Chairman, I am William B. Lacy, director of the Cooperative Extension System at Cornell University. My testimony as the chair of the fiscal year 1998 Budget Committee represents all state directors and 1890 administrators of Cooperative Extension in the United States.

The Cooperative Extension System has a rather extensive and intensive process for program priority setting. The budget I present today has been through this same scrutiny. Our budget development committee is comprised of representatives from all regions of the country, as well as representations from our citizen advisory committee, CARET. Each line item in this budget was carefully examined.

Understanding the fiscal climate in which we make this budget presentation, we have limited our requests for significant increases to a few key critical areas. However, based on the fiscal problems in many states, reductions in the Extension budget at the federal level are not apt to be offset by state, county or private funding partners. These partners now provide over seventy percent of the Extension System's annual budget across the nation. Thus, each federal dollar is very important because it leverages several more dollars from state, local and private sources and serves as the "heart" of this unique partnership.

Congress has been supportive as the Extension System has focused on seven base programs and six targeted national initiatives within these base programs. We have emphasized issues which require a solid research base and applied education. We have strengthened our resolve and commitment not only to agriculture, but to the entire food and fiber system while maintaining strong programs in family, youth and community issues.

The highest priority for the Cooperative Extension System is a 5.5 percent increase in the funding for base programs. In addition, this budget request includes added support in several of the targeted programs, and two new initiatives: "Managing Change in Agriculture" and "Pesticide Applicator Training."

BASE PROGRAMS

Smith-Lever 3 (b)(c).—Base funds, along with matching state and local funds, provide the nucleus for maintaining the scientific and community-based network which is critical to the implementation of the base programs and the national initiatives. This network of faculty and staff of 74 land-grant universities represents an intellectual resource unmatched by any other country of the world. In addition, nearly three million trained volunteers work with the Cooperative Extension System in areas such as health, nutrition, gardening, financial planning and youth development. Access to research-based education and information enables agricultural producers, agribusiness leaders, community leaders and citizens at-large to make better decisions, in order to compete in an increasingly global market place. No other informal education system has the capabilities of reaching citizens in some 3,150 counties in the United States.

This increase will help to maintain a strong base for Extension programming across the country and provide the important foundation for the national initiatives, such as "Integrated Pest Management" and "Children, Youth and Families at Risk."

1890 Colleges and Tuskegee University.—These institutions maintain base programs geared to the needs of culturally diverse audiences, especially those limited in selected economic as well as social resources. Funds provided these institutions have helped them prioritize highly essential educational initiatives focused on families, community leadership, small scale farms and youth programs. These programs are designed to address new directions for what has become a large audience of people at risk and generally out of the mainstream of society. This 5.5 percent increase for the 1890's would enhance programming capabilities in key areas.

NATIONAL PRIORITY INITIATIVES

The national increases are requested for three national priority initiative programs: "Food Safety and Quality," "Sustainable Agriculture" and "Children, Youth and Families at Risk."

Food Safety and Quality.—A safe food supply is of utmost importance to consumers as well as food producers, processors and distributors. Public concern about food contamination has escalated during the last decade. Even so, information about the causes and prevention of food-borne illnesses is still very limited. Furthermore, much of the current knowledge is inadequately applied and practiced. This program is to ensure a safe and nutritious food supply through linked research and education.

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Extension education programs focus on protecting the safety of food from production to consumption. These programs assist food producers and processors, food service establishments and consumers in understanding safe production, handling and preparation practices. The Hazard Analysis and Critical Control Points (HACCP) model is used as the primary basis for these educational programs. We are proposing \$4.365 million for fiscal year 1998; the fiscal year 1997 appropriation was \$2.365 million.

Sustainable Agriculture.—Sustainable agriculture is a systems framework of technologies and procedures that provides for continuing productivity. The challenge for sustainable agriculture is to develop systems that are economically sound, socially acceptable and environmentally benign. Sustainable agriculture systems are site-specific and require skillful management. Effective sustainable practices are based on all factors that affect a specific site, such as soil type and fertility, cropping history, microclimate conditions, surrounding vegetation and pest pressures. This program relates to and complements food safety, integrated pest management, water quality, agroforestry, other environmentally-related activities and rural development. We request \$4.0 million to continue this program. The fiscal year 1997 appropriation was \$3.309 million.

Children, Youth, and Families at Risk.—Land-grant universities have developed the finest system of non-formal education for young people. The system uses preventive educational programs to help youth and families become healthy, productive, financially secure and responsible members of their community. Extension has built linkages and networks with many agencies that provide services to children and family. Currently, 49 states and six territories conduct “Children, Youth and Families at Risk” programs. The current federal appropriation of \$9.554 million leverages an additional \$40 million and involves the support of nearly 37,000 volunteers for its programs. We request that the \$9.554 million appropriation be increased to \$11.7 million, so this important work of salvaging and rebuilding human capital may reach more youth and families.

SPECIFIED PROGRAMS

Mr. Chairman, specified programs we recommend for level funding are:

Farm Safety/Agribility	\$2,855,000
Agricultural Telecommunications	1,167,000
Rural Health and Safety Education	2,628,000
1890 Extension and Research Facilities	7,549,000
Extension Services at the 1994 Institution	2,000,000

Three specified programs are recommended for modest increases:

Expanded Food and Nutrition Education Program (EFNEP).—We request that EFNEP funding be increased from the current level of \$58.695 to \$60.0 million. The EFNEP program is functioning in 725 sites and in all 50 states. Within these sites last year, the program provided intensive nutrition education for nearly 200,000 family household heads. These adults represented about 739,000 family members. In addition, the EFNEP program involved over 400,000 youth in special nutrition education programs, primarily during the months when the school systems were in summer recess. These various educational experiences for youth and adults are provided primarily by persons indigenous to the program sites, well trained in basic nutrition education and teaching skills and kept current by university nutrition professionals. It is also important to note that all of the 725 sites function in cooperation with the various nutrition and feeding programs of the U.S. Department of Agriculture and the state and local youth and adult public assistance programs.

Integrated Pest Management.—We request that funding be increased for Integrated Pest Management (IPM) from \$10.783 million to \$15.0 million. Pesticide use in agriculture, as well as in urban America, continues to be a major public issue. IPM programs set the stage for innovative crop protection programs that meet economic and environmental needs. Additional resources are needed if the goal of establishing effective IPM practices on 75 percent of the crop land is to be achieved by the year 2000. The increase will address this concern and supports the Department of Agriculture’s initiative.

Renewable Resources.—We request that the Renewable Resources Extension Act funding be increased from the current level of \$3.192 million to \$3.368. Public forests and rangelands now emphasize production of non-commodity values and commodity production has decreased. Concurrently, federal requirements for environmental protection on private lands have increased (Endangered Species Act, Wetlands Protection). Private landowners are, therefore, challenged to provide both increased commodity output to meet the nation’s needs and increased environmental

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protection. Intensive management of non-industrial private forests for greater profitability, commodity resource output and environmental protection will be enhanced by this expanded educational effort. The impact on currently declining rural communities will be positive.

Three additional programs are recommended for slight increases: Rural Development Centers (fiscal year 1997 \$.908 million; fiscal year 1998 recommendation is \$1.0 million); Pesticide Impact Assessment (fiscal year 1997 \$3.214 million; fiscal year 1998 recommendation is \$3.3 million); and Reservation Extension Agents (fiscal year 1997 \$1.672; fiscal year 1998 recommendation is \$1.724).

NEW PROGRAM INITIATIVES

Funding is requested for two new program initiatives: "Managing Change in Agriculture" and "Pesticide Applicator Training."

Managing Change in Agriculture addresses how the Cooperative Extension System can assist the U.S. agricultural sector in managing the changes that are impacting the sector in the 1990's. These changes include: globalization of markets; declining governmental "safety nets;" public concerns and expectations for production and processing of safe food at reasonable prices, while protecting the environment; rapid technological advances; and accelerated industrialization of agriculture.

Within the agricultural sector, the forces of change are causing significant shifts in how business is done. These include: structural integration of input suppliers, producers and processors through increased use of contracts, alliances and other linkages; more product specificity driven by consumer tastes and preferences, and technological advances in the distribution and retailing of food and fiber products; industrialization of additional commodity areas including vegetables and pork, with the expectation that this trend will spread; and the rise of a new class of entrepreneurs who focus on the assembly and distribution of inputs and products without being centrally involved in the production processes.

The Cooperative Extension System, in concert with the agricultural private sector, will provide the leadership for the initiative. Funding will be sought from three sources: \$4.0 million for extension through your committee, Mr. Chairman, with matching funds from the state government and private sector. This will leverage the initiative into a \$12.0 million plus program.

Pesticide Applicator Training funding is a collaborative effort between the Department of Agriculture and the Environmental Protection Agency. Each is requesting \$1.5 million to support, in part, the training of users of restricted use pesticides so they can be certified users. This is a very demanding program because of the number of people that require training each year to become certified or recertified. The participants needing this training are growers, commercial applicators and home owners. The total cost of operating this program exceeds \$9.0 million a year. Thus, other state and local public funds and private funds are heavily committed.

SUMMARY

Mr. Chairman and Members of the Subcommittee, the Cooperative Extension System is mindful of the significant economic, technological and societal changes occurring in our nation. Thus we have redirected programs to better serve the needs of agriculture, the food system and rural America, to address directly the growing needs of children and families facing difficult situations and to help communities work for a better future. We have focused on issues of national importance, identified at the grass roots level. We very much appreciate your continued support to invest in initiatives of national importance and serve the needs of the citizens of this country.

We thank you for this opportunity to present our budget proposal for fiscal year 1998.

PREPARED STATEMENT OF DR. JAMES P. LASOIE, RESEARCH CHAIR, NATIONAL ASSOCIATION OF PROFESSIONAL FORESTRY SCHOOLS AND COLLEGES, AND CHAIR, DEPARTMENT OF NATURAL RESOURCES AT CORNELL UNIVERSITY

The National Association of Professional Forestry Schools and Colleges (NAPFSC) represents the 67 universities that conduct the Nation's research, teaching, and extension programs in forestry and related areas of environmental and natural resource management. We appreciate this opportunity to comment on the three programs administered by the U.S. Department of Agriculture (USDA) which greatly enhance the abilities of our member institutions to effectively meet the needs of the American People: the McIntire-Stennis Cooperative Forestry Research Program

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(McIntire-Stennis), the Renewable Resources Extension Act (RREA), and the National Research Initiative (NRI).

Funding appropriated by Congress for McIntire-Stennis, in particular, has been a key part of university-based research support offering the flexibility to pursue high priority research needs in forestry while proving vital to the training of future scientists, educators, and managers. For more than 25 years, these funds have been judiciously allocated and have brought much in return. Each dollar in federal appropriations has been leveraged by a factor of five in nonfederal dollars in support of research programs having state, regional, and national significance. This is a very cost-effective and far-reaching program. RREA has been the principle vehicle for timely dissemination of new knowledge and it has leveraged more than three dollars for every dollar appropriated. Finally, NRI has been crucial to fundamental and interdisciplinary research. All three programs have stimulated the development of unique partnerships involving universities, various federal agencies, nongovernmental organizations, and industry.

Throughout the country these three programs have been unqualified successes. They have improved the understanding of (1) the biology of forest organisms; (2) the structure and function of forest ecosystems; (3) human-forest interactions; (4) wood as a renewable raw material; (5) economics, environmental policy, and business management related to the forest industry; and (6) international trade, competition, and cooperation. These programs have advanced our knowledge of the forest ecosystem including the basic chemical, physical, and biological forces that influence forest health and productivity. At the same time, they have expanded the marketing horizons for environmentally friendly and renewable wood and fiber-based products. Furthermore, they have significantly aided the development of new forest management systems for multiple-uses including timber, water, wildlife, grazing, recreation, and aesthetic purposes. Very recent work has examined the economic and ecological benefits of combining agricultural and forestry practices into integrated land-use systems termed "agroforestry."

Why fund forestry research now? Unlike many sectors of the Nation's economy, justifying private investment in forestry research is problematic. The payoffs can be large, but individuals or industries are often deterred by the size of the investment required and the fact that benefits are diverse, accrue widely to society, and are not readily quantifiable. Consequently, most industry support is focused on product development where benefits are readily captured. Forestry research is especially difficult for individual landowners to perform because research problems are often very large and commonly extend beyond any single ownership. Also, forestry research investments are usually long-term with benefits accruing well into the future.

Federal funding is urgently needed because forestry in the United States is undergoing a major transition. Until recently, wood and wood fiber demands have mainly been met in significant part from federal lands. However, recent controversies over endangered species and alternative land-use practices have led to challenges to USDA Forest Service's management plans which have greatly reduced the level of harvesting on federal lands. This means the bulk of the supply requirements has shifted to privately owned forest lands. To meet this major change, research priorities must be adjusted to better address the needs of private land owners, and to specifically enhance the productivity of such lands through economically efficient and environmentally sound means. Imports are not a viable option as the Nation cannot afford the trade imbalance, loss of jobs, or the importing of potentially serious plant, animal, and human diseases and pests. These challenges, however, can be met by the university community through the building of integrated research and extension programs assisted by McIntire-Stennis, RREA, and NRI.

Who benefits? Forestry research provides many direct and indirect benefits to society by increasing forest productivity, improving forest health, and providing diverse employment opportunities—all while enhancing environmental quality and improving environmental protection. Forests contribute substantially to the economic well-being of the United States. Forestry related employment constitutes a large sector of our work force, including manufacturing, research, and recreation. Forest product companies alone employed 1,580,000 people in 1988, representing 8.5 percent of the Nation's manufacturing work force. Many of these benefits accrue in rural areas of the United States where economic and social viability remain a wide spread concern. In addition, approximately seven million nonindustrial private forest land owners manage almost 60 percent of the Nation's timberland. These private citizens depend on the generation of critical forestry research information and its accessibility through extension to support and improve the wide range of public and private benefits arising from their investments. Society as a whole benefits from the improved recreational opportunities and amenity values provided by healthy forests. By increasing our understanding of forest ecosystems, the forestry research-exten-

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sion partnership also improves our ability to protect the environmental amenities associated with forest lands, including the protection of biodiversity and the improvement of water and air quality.

The sum of these arguments is that the past, present, and future success of forestry research and extension activities arising from the NAPFSC member institutions results from a unique partnership involving federal, state, and private co-operators. Much of the funding of forestry and forest products research comes from the private industrial sector. However, such funding is commonly committed within the companies themselves and is typically focused on near-product development where the benefits of investments are readily captured. Federal agencies have concentrated on large-scale national issues while state funding has emphasized applied problems and state-specific opportunities. University research in contrast, with the assistance of federal, state, private, and other support, has been able to address a broad array of applied problems related to technology development and fundamental biophysical and socioeconomic issues and problems that cross ownership, state, region, and national boundaries. This testimony encourages continued federal participation in this partnership with NAPFSC institutions by providing specific funding recommendations for McIntire-Stennis, RREA, and NRI. In particular, the federal share has been an important incentive and mechanism for focusing on the most meaningful mix of state, region, national, and international issues and problems and for leveraging funds from other sources.

Where are we? The partnership between the federal government and the NAPFSC has been long-standing and has proven very successful. Over the years, Congress, through its continued support of McIntire-Stennis, RREA, and NRI, has provided the funding avenues to address the above noted applied research needs in timely fashion. However, despite the gains made in developing research information needed to maintain the health, productivity, and environmental quality of our forest resources, much remains to be done.

We know only too well the public's concerns, both pros and cons, over such issues as ancient forests, threatened and endangered species, global warming, wetlands and wilderness preservation, and tropical deforestation. Furthermore, it is now paramount that these issues be addressed within the broader context of the need to enhance and sustain the economic, ethical, and social systems which are important to all Americans. Despite past progress, this testimony is driven by the fact that the scientific base to which resource management and national, state, and local policy measures can be anchored is simply inadequate. The urgent need for research on environmental issues related to forest lands is most apparent at the state and local levels. Management of land for timber, water, wildlife, and recreation is becoming increasingly more difficult and expensive because we lack reliable information on the best management and harvesting practices on a site specific, landscape, and regional basis. Finally, the emerging area of agroforestry lacks the biophysical and socioeconomic data bases critical for its implementation.

What are the important implications? The funding by Congress of McIntire-Stennis, RREA, and NRI has permitted NAPFSC institutions to quickly respond to changing research priorities in forestry. This year's request is for your continued support of university-based forest research and extension. This request reflects the increasing importance of forest resources to the economic, environmental, and social well-being of our citizens. The growing and processing of timber provide the economic superstructure for literally thousands of communities in all regions of the country. Some examples are:

- In Texas timber is the second largest crop and it accounts for the largest value-added sector associated with agricultural production.
- In New York forests cover almost 62 percent of the state, forest-related businesses employ about 122,400 people, and annual sales and payrolls from forest based industries total \$13.3 billion.
- In Wisconsin the primary wood using industry employs over 94,000 people representing one in every six manufacturing jobs.
- In Mississippi 38 percent of all manufacturing firms are in the forestry sector.
- In Illinois forest related industries employ 55,000 people and contribute \$2 billion in valued added manufacturing.
- In Arkansas the forest products industry accounts for one of every six basic jobs. Over half of the state is forested and timber was the state's leading cash crop.
- In Oregon the forest products industry represents 31 percent of the manufacturing jobs and represents \$.35 of every \$1 generated by the state's economy.

Whether by weight or volume, wood is our most widely used raw material. There is also convincing evidence that forest products will become even more important in the future. Global demand is increasing and coincides with diminished supplies

in many established wood-producing countries of the world. The United States is well positioned in terms of timber supply and the manufacturing and transportation infrastructures needed to satisfy a major share of this increase in demand. However, continued economic competitiveness of forest-based industries in today's society requires that we develop more efficient and environmentally benign production and processing systems. These systems will be essential to success in increasingly competitive international markets.

The above economic characterization is not complete. We must add the very significant degree to which our forests provide the setting for outdoor recreation and the considerable economic impacts associated with such uses. In many areas, tourism and the forest products industry coexist very effectively and together make for very viable rural communities. There is also convincing evidence that forests, by virtue of their structure, will become even more important in maintaining biodiversity and the gene pool for a wide range of plants and animals. Especially important will be the role of forest communities within complex landscapes and the biophysical, social, and economic interrelationships between different land uses, including urban/suburban development.

Overall, we are facing problems that are more pervasive and complex than any previously addressed by humankind. We must question our collective ability to provide the diversity of goods, services, and values currently demanded by a pluralistic society while sustaining the natural resource and environmental quality bases equally critical to future generations. The structures and partnerships are in place to address these tough issues, but we must recognize that these relationships are fragile ones. Continued Congressional support of the McIntire-Stennis, RREA, and NRI will insure that we will continue to improve our understanding of how forest ecosystems function under a continually changing set of socioeconomic conditions.

A framework for action has been established.—Three years ago the National Research Council published a study of forestry research needs which had been commissioned by the National Academy of Sciences. This report, entitled *Forestry Research A Mandate for Change*, supported and recommended a significant strengthening of forestry research in the United States. Following the report, an implementation committee began working closely with partners including the USDA Forest Service, state foresters, forest industry, professional societies, and various interest groups to develop a cooperative effort known as the Forestry Research Initiative. The NAPFSC institutions and many of our cooperators see the expansion of this effort as an imperative for the environment and the economy and consider the Forestry Research Initiative to be a road map for this expansion. One example of this commitment is the recent report of the Forestry Research Advisory Committee (FRAC) of the USDA. This report highlighted questions relevant to forest policy needs and recommended additional investments in the following areas beginning in fiscal year 1996. These priorities continue to be relevant and to serve as a guide for forestry research and extension programs across the Nation. They include a need to:

- improve existing inventories and assessments of forest resources and their many functions;
- conduct research to improve the understanding of ecosystem dynamics and alternative forest management systems on the most productive lands to meet increasing demands;
- develop adaptive management strategies and prototypes for multiple-use management of forest lands to provide both commodities (wood and fiber) and other resource values (water quality, wildlife habitat, livestock grazing, recreation and aesthetics); and
- build a forestry research and education infrastructure to foster interdisciplinary studies on long-term sustainable forest management, promote timely scientific synthesis and communication, and provide anticipatory leadership.

Role of university leadership.—Given these recommendations, it is important to recognize that forestry and natural resources research and extension programs arising from NAPFSC institutions are ideally positioned to make key contributions to these efforts and to society. We have a history of solid achievement in terms of (1) basic long-term inquiry; (2) issue-focused, problem-solving interdisciplinary research and development; (3) scientific support to the ongoing management of rural lands; (4) innovation in new product development, utilization, and recycling; (5) integrating science and the human dimensions of resource use into the policy-making process; and (6) close working relationships with the users of research information being facilitated through extension.

University-based forest research is also a key part of the collaborative research effort involving federal, state, and industry scientists and resources. Schools and colleges with programs in forestry, forest products, and natural resources have the expertise in-house to address a broad range of problems and opportunities related to

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the forest resource and its utilization. Because of their university affiliation, the faculty can conduct research on problems that require scientists from many disciplines.

The FRAC report also highlighted the need for a systematic extension process to:

- provide continuing education for natural resource professionals;
- enable landowners/managers/industry to access, adapt, and utilize research results;
- assure basic understanding by public decision-makers; and
- reach the general public with education to guide their individual and collective efforts.

Here NAPFSC institutions—with their well-established education, extension, and communication capabilities—can play a lead and very cost-effective roles.

We see the federal funding programs described herein as especially important to state and regional concerns as pressures on federal lands are shifted to private ownerships. In articulating the initiative described above, funding to universities would be largely directed to the problems of state, local, and private ownerships. In particular, the large, nonindustrial private forest landownership nationally is one that will have to carry a larger share of the burden for timber production and multiple use. These lands are also where considerable improvement in management is both desirable and possible for a wide range of forest values.

Our fiscal year 1998 request.—Those of us at NAPFSC institutions know that our request for continued funding for forestry research and extension comes at a time when Congress must deal with severe budget constraints. We know you are looking for cost-effectiveness, accountability, and leverage—all within an important backdrop of reducing the National Debt. We commend you for this effort. We also know that you value the concept of investing in programs that will shape the future of the United States. Given this situation, we call your attention to the major transition that has occurred in forestry and the associated land uses in America's rural areas. The number and complexity of the economic, social, and environmental problems associated with the forest resources of the United States and the world will likely grow unless we continue to invest strongly now.

It is this concern for the future that leads us to request your support in securing an appropriation of at least \$21.625 million for the McIntire-Stennis Cooperative Forestry Research Program. This is the key federal program in support of forestry and natural resources research through our Nation's Land Grant Universities.

We also ask your continued support of an important component to our applied research program—the Renewable Resources Extension Act at a modest funding level of at least \$3.368 million. Extension activities made possible through the RREA have become integral parts of the outstanding programs conducted by the Cooperative Extension Service in each state. Funding for this Act have made possible the timely dissemination of research results derived from the McIntire-Stennis and NRI.

Lastly we urge your support of the Competitive Grants Program administered under the National Research Initiative of the USDA. Peer competition for grants is at the heart of the university system and this program has become very important to natural resource scientists working within NAPFSC institutions. Research funds from NRI enable NAPFSC institutions to build upon the base provided by McIntire-Stennis. We urge funding of NRI at a level of at least \$113.5 million, and specifically endorse a funding level of at least \$22.0 million for its Natural Resources and Environment Program.

Final comment.—We respectfully ask that you consider the continued funding of the McIntire-Stennis Cooperative Forestry Research Program, the Renewable Resources Extension Act, and the National Research Initiative. This is not simply a request for NAPFSC institutions, forest industries, or environmental organizations. Nor is it a request to only aid the forest landowners nationally. Rather, it is a request to address crucial needs and issues and invest in work that can have a significant positive effects on the environmental and economic health of our society for decades to come. Thank you.

PREPARED STATEMENT OF DR. DONALD K. LAYMAN, ASSOCIATE DEAN, COLLEGE OF AGRICULTURAL, CONSUMER AND ENVIRONMENTAL SCIENCES, UNIVERSITY OF ILLINOIS

The Board on Human Sciences of NASULGC represents the colleges and programs of human, family and consumer sciences. These colleges have grown out of the heritage of home economics and provide national leadership in programs of foods, nutrition, health, human development, social and economic well-being of individuals and families, and environmental design. The testimony today is in support

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of the funding recommendations of the NASULGC Board on Agriculture fiscal year 1998 budget.

TOP PRIORITIES FOR FISCAL YEAR 1998

Strengthen Base Programs for Research, Extension and Higher Education.—The Hatch and Smith-Lever base programs of the national land grant system provide a critical foundation for programs in human sciences and provide the infrastructure to support and enhance the essential federal, state and local partnerships. This partnership is critical to maintain global competitiveness, to support the well-being of youth, families and rural communities, and to achieve Welfare Reform. We recommend a 5.5 percent increase in funding for base programs for research and extension over fiscal year 1997.

Advance Special Initiatives.—Special initiatives address five critical priority areas as defined by the National Agricultural Research, Extension, Education and Economics Advisory Board (NAREELAB). These “targeted funds” address specific issues and provide short-term response to critical problems. Programs in the human sciences contribute extensively to three of the special priority areas:

- A safe and secure food and fiber system
- Healthy, well-nourished children, youth and families
- Enhanced economic opportunity and quality of life for Americans

Issues of Welfare Reform, food safety, nutrition and health, youth-at-risk, and rural economic and social development are critical national issues where Human Sciences programs at the land grant universities provide unique expertise and the Base programs provide the critical infrastructure of research and extension.

Special Initiatives in research and extension are outlined below.

Research

The National Research Initiative (NRI) has served to revitalize and strengthen basic research in areas of agriculture, food, nutrition, rural development, and the environment. Under Research Grants Public Law 89–106, Sec. 2b of the fiscal year 1998 budget, we recommend an increase in the total NRI program to \$113.5M with specific interest in competitive grants in Nutrition, Food Quality and Health (\$10M) and Markets, Trade and Policy (\$8M). Programs in Human Sciences make major contributions to each of these areas. For Nutrition, Food Quality and Health, we contribute extensive expertise in food safety, human health through proper nutrition, molecular and cellular basis of human nutrition, and dietary patterns and behavior of the consumer. For Markets, Trade and Policy, we provide leadership in rural development, economic performance, stability and well-being of families, youth and the elderly, and education policy.

Under Special Research Grants (Sec. 2c) Food Safety (\$3M) is a new initiative designed to be a collaborative research and extension program. A safe food supply is of utmost importance to consumers as well as food producers. Public concern about food contamination continues to grow, but information about the causes and prevention of food-borne illnesses is still very limited. This program is to ensure a safe and nutritious food supply through linked research and education.

Rural Economic and Social Development is recommended at (\$2M). There are over 34 million poor people in the United States with approximately 9 million living in rural areas. New information and strategies are needed to overcome rural poverty through training individuals and empowering communities to work toward positive economic development. These funds would be used to develop models of family, community and agency activities to enhance the quality of life, to identify barriers to family and community development, and to identify means to provide increased job opportunities in rural areas.

Extension

Extension is a network of professionals and paraprofessionals connected to land grant universities who serve the needs of local people and communities. It is a life-long learning system that links the education and research resources and activities of 74 land-grant universities, 3,150 counties, and the U.S. Department of Agriculture (USDA). Extension's network includes 32,000 employees and 2.8 million trained volunteers.

National Extension Priorities include several of particular concern to the well-being of individuals, families and communities. Critical funding needs exist for Water Quality (\$10.7M), Food Safety and Quality (\$4.3M) and Youth and Families at Risk (\$11.7M).

Extension and the land grant university have a long-standing commitment to Youth and Families at Risk. Extension currently serves over 5.6 million youth through 4–H and other educational programs for youth and families. Rural and

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urban communities share increasing problems with social factors that put youth at risk. In collaborations with federal, state and local partners, Extension has implemented effective community-based educational programs for youth, parents and local leaders. Prevention and intervention are very cost effective compared to remedial costs to society.

Expanded Food and Nutrition Education Program (EFNEP) (\$60M).—EFNEP is a voluntary, nutrition education program for low-income families. It is currently present in 725 cities across all 50 states. Programs of EFNEP provide intensive nutrition education for nearly 200,000 families plus involve over 400,000 youth in special nutrition education programs during the summer. EFNEP programs work in cooperation federal, state, and local nutrition and feeding programs to enhance understanding of nutrition and food safety for health.

A major change for low income families and rural poor is Welfare Reform. The primary concept of welfare reform is personal responsibility. Personal responsibility for welfare recipients will mean starting at many different skill levels from the very basic to skilled to be ready to go to work and maintain employment. It will mean training and education to understand the expectations of a work environment, as well as the skills to perform successfully within that environment. Extension Service has a long record of successful education programming.

Jobs and the creation of new jobs are necessary for work to occur. Extension has the expertise to help communities with small business development. This creates economic opportunities and helps make possible creative local solutions for Welfare Reform. Extension has partnerships for training already in place, these partnerships should be encouraged and strengthened across all programs and agencies to create long term solutions.

Child care has come to the forefront in Welfare Reform. Extension is actively addressing this issue with training and certification programs, with consulting for local and state agencies and with the education of future child care providers. The issue of who will care for America's children while parents are at work challenges the premise that families are our primary concern. The reasonable way to achieve adequate, secure child care is to work together in communities to devise solutions that work locally.

PREPARED STATEMENT OF DR. P.S. BENEPAL, ASSOCIATE DIRECTOR OF RESEARCH,
VIRGINIA STATE UNIVERSITY

Senator Thad Cochran, Chairman, and distinguished members of the Committee, the Association of Research Directors (ARD) strongly supports the budget recommendations for fiscal year 1998 submitted by the Budget Committee, Board on Agriculture, NASULGC. The two top priorities recommended by the NASULGC for fiscal year 1998 are to strengthen the base programs for research, extension and higher education, and to sustain current high priority initiatives and to mount a few new programs in much needed critical priority research areas. A modest increase of 5.5 percent in base funds for research is being requested. These programs represent the long-term commitment of Land-Grant Universities to maintain a stable research base including personnel and facilities in the food and fiber and agricultural and environmental sciences, and natural resources.

1890 EVANS-ALLEN RESEARCH PROGRAM (\$29,261,000)

We strongly support the recommendation for an increase of 5.5 percent in base funds for the Evans-Allen Program for the 1890 institutions in fiscal year 1998. These funds provide the primary and principal support to conduct basic and applied research to ensure a safe, economical and adequate food supply, promote a sustainable environment, conserve the natural resource base, and contribute to the improvement of the socio-economic well being and overall quality of life of diverse rural and urban populations. These funds also contribute to the development of professional expertise (especially, minority persons) in the food and agricultural sciences through focused programs.

1890 CAPACITY BUILDING GRANTS PROGRAM (\$10,000,000)

We strongly support the recommendations for funding the 1890 Capacity Building Grants Program at \$10,000,000 in fiscal year 1998. This program is critical in enhancing teaching and research programs at the 1890 Land-Grant Colleges and Universities and in advancing partnerships with industry, USDA agencies and other institutions of higher education. This is a highly competitive program which helps to

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build greater capacity in research and teaching in food and agricultural sciences at these Institutions.

1890 RESEARCH AND EXTENSION FACILITIES GRANTS PROGRAM (\$7,549,000)

We strongly support the 1890 Extension & Research Facilities Grants program at a funding level of \$7,549,000. This program was authorized in the Food, Agriculture, Conservation and Trade Act of 1990. The facilities program enables the 1890 Institutions to develop state-of-the-art facilities and acquire needed equipment for scientific research and outreach for training of students.

RURAL ECONOMIC AND SOCIAL DEVELOPMENT (\$2,000,000)

We also strongly support the initiative for 1890 Institutions on Rural Economic and Social Development at \$2,000,000 in fiscal year 1998. Over 55 percent of the rural poor and 97 percent of the rural black poor live in the South. Targeted research is needed that will specifically address the disadvantaged and under served communities and families in the following areas: barriers to family and community development; incentives for new linkages and partnerships; infrastructure needs; business and job opportunities; enhanced development of human capital and leadership; use of natural resources for community development; and new markets for agricultural products.

Mr. Chairman, on behalf of the ARD, I wish to express our thanks to you and the distinguished members of the committee for this opportunity to submit this testimony.

PREPARED STATEMENT OF THE NATIONAL ASSOCIATION OF WIC DIRECTORS [NAWD]

WIC is a program of which you should be very proud. WIC is a short-term intervention program designed to influence lifetime nutrition and health behaviors in a targeted, high-risk population. WIC provides services in 9,000 clinics administered by 1,800 Local Agencies in 86 State WIC Programs.

Of the federal appropriation, only 9 percent of the WIC grant is allocated for program administration; 16 percent is allocated for direct client services needed to assess individuals nutrition, health and income eligibility, provide nutrition education, breast-feeding support and promotion, prenatal, pediatric and immunization screening and referral to provide drug, alcohol and tobacco abuse information, to prescribe and issue food benefits, register voters and provide other mandated or necessary client services. The remaining 75 percent of the WIC grant is allocated for food benefits.

WIC's monthly food prescription (package), tailored to meet the specific nutritional needs of each client, is serving 7.4 million participants including 1.8 million infants, and 3.89 million children. WIC requires that clients have one or more documented nutrition risks and incomes less than or equal to 185 percent of the poverty level. In fact, 94.5 percent of all WIC participants have incomes below 150 percent of the poverty level.

Numerous studies show that pregnant women who participate in WIC seek earlier prenatal care and consume more healthy diet. They have longer pregnancies leading to fewer premature births; have less low and very low birth-weight babies; and have fewer fetal and infant deaths;

It costs \$544 a year for a pregnant woman to participate in WIC. By contrast, it costs \$22,000 per pound to give a low and very low birth-weight baby to normal weight of 7 pounds in a neonatal intensive care unit. WIC prenatal care benefits reduce the rate of very low birth-weight babies by 44 percent.

WIC promotes breast-feeding as the preferred method of infant feeding. Breast milk contains all the nutrients infants need to grow and develop. Breast-fed infants tend to be healthier since they receive antibodies from the breast milk, which protects them against infection. In 1994, WIC mothers increased their breast-feeding initiation rates to 44 percent.

WIC helps to assure children's normal growth, reducing levels of anemia, improving access to regular health care, increasing immunization rates, and improving diets. Forty-seven percent of all infants born in the United States are on WIC. Eighteen percent of all children in the United States are on WIC.

Four and Five-year-olds whose mothers participated in WIC during pregnancy had better vocabulary test scores than children whose mothers had not received WIC benefits. Children who participated in WIC after their first had better digit memory test scores than children who did not participate in WIC.

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States stretch available WIC funds through rebates on foods and other cost saving initiatives. State WIC agencies use their infant formula buying power to achieve bulk purchase savings, in the form of monthly rebates paid by infant formula manufacturers. Rebates save over \$1.1 billion for federal tax payers and fund services for 1.5 million women and children.

NAWD supports both the Administration's \$100 million supplemental appropriation request for WIC in fiscal year 1997 and its increase of just over \$378 million (including \$100 million for an emergency contingency reserve) in WIC funding for fiscal year 1998.

NAWD is aware that a major concern of the Committee has continued to be the amount of carryover funds projected into the next fiscal year. Why is a supplemental needed given that carryover funds are available to the Program?

WIC Directors cannot overspend their WIC grants. It is not possible, nor is it prudent management, for WIC to expend all of its appropriated resources in a given fiscal year. WIC managers have typically experienced carryover margins of between 3 percent and 4 percent or about three cents on the dollar of the total WIC grant. This is well within the operating margins of the nation's fortune 500 companies.

What happens at the local level, makes it difficult to give precise estimates of expenditures. The Public Health Foundation WIC Program of Los Angeles, for example, schedules about 240,000 families to receive WIC services within a 2 month period. Each month about 110,000 families will come in to receive WIC services. Each family member will receive about 10 checks for specific foods. Some of these checks are for this month and some are for next month. Each family spends the WIC checks at authorized grocery stores. The price of the foods on each check varies from store to store and day to day. The food instruments are for specific choices of food—for example 2 dozen eggs. They have dollar limits, but the food instruments are not for specific dollar figures. In other words, the cost of the 2 dozen eggs may be \$1.79 today at one store and \$1.75 at another store. The market deposits the food checks to the bank which in turn submits the checks to the state for reimbursement. The WIC client has 30 days to purchase the WIC foods. If she receives WIC food checks on 25 September, she will purchase the food perhaps in 3 or 4 trips to the market during the 30 day period. The market also has a legal time frame in which to deposit the checks to the bank. Time lags occur in the process. The point of all this is that USDA, the state and local agencies do a remarkable job of bringing the participation and expenses of this wonderfully complex program to within 97 cents of each dollar appropriated.

Voucher redemptions which occur late in the fiscal year are redeemed through a state's financial system after the close of the fiscal year. This makes it difficult for managers to predict exactly what their voucher redemption rates will be.

As with vouchers, rebate transactions late in the fiscal year do not accrue to a state until early in the next fiscal year. This results in carryover monies from the previous fiscal year when rebate checks received from formula vendors are not fully utilized to cover expenses incurred in the previous fiscal year.

On average, states will expend roughly 97 percent of their federal grant to ensure a sufficient of safety to prudently manage the program and prevent caseload disruptions.

States have made every effort to prudently reduce the level of carryover funds available in the program, voluntarily advising USDA of available recoveries, and rendering resources available for frequent reallocation to those states most in need of resources.

Without the supplemental, caseload levels of 7.4 million reached in November, seasonally adjusted downward in December, and somewhat recovered in January, to perhaps the September 1996 level, will soon begin to experience reductions as States seek to manage resources within anticipated levels for the remainder of the fiscal year.

The Administration's fiscal year 1998 Budget request of nearly \$378 million includes a \$100 million contingency fund to cover unexpected WIC food cost increases. As this fund is only meant to cover emergency situations, the actual request is approximately \$278 million. This amount is necessary for the following reasons. The amount of carryover funds anticipated for fiscal year 1998 are expected to be less than for the current fiscal year. To maintain current participation levels and prevent caseload reductions, the reduction in carryover funds available in fiscal year 1998 must be adequately offset by fiscal year 1998 appropriations. WIC food costs rose dramatically in fiscal year 1997 and may do so in fiscal year 1998 as a result of continuing dairy pressures, and anticipated fruit juice and cereal price increases. And finally, if the WIC Program is to reach the Administration's full funding goal, additional resources will be needed. The Committee should note, that even if the

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Administration's goal is met, there will still be over 1.5 million potentially eligible WIC participants who will go unserved.

Finally, a few thoughts with you as regards the State Spending Plans provided by USDA to the Committee. NAWD has learned from its members that there appear to have been several disparities in the directions given by the various USDA Regional Offices to the States as they prepared their individual Spending Plans. The Plans were requested in such short order that States did not have adequate time to appropriately reflect on the substance of the requests. Political pressures in some States seem to have forced Directors to provide data reflective of 100 percent grant expenditures which may not necessarily be reflective of historical experience.

In addition to funding limitations, other challenges affect the WIC Program's ability to make the best use of existing funding.

The President's Budget Proposal provides for \$12 million to fund the Farmers' Market Nutrition Program, FMNP. NAWD recognizes the importance of FMNP, which support WIC's health and nutrition objectives. NAWD recommends that alternative methods for funding the FMNP be explored. Currently, funding for FMNP is subtracted or set-aside from the WIC appropriation. If funding FMNP is to be at the expense of cutting WIC caseload, then maintaining WIC caseload must be the priority of policy makers. If FMNP is to remain a part of the WIC appropriation, we urge the Committee to empower WIC Directors with the ability to make management decisions to protect WIC caseload and prevent the diversion of WIC resources to FMNP or other programs.

Spending constraints and operational limitations in WIC policies and regulations limit States' ability to maximize the use of Program resources. These constraints govern the management of the WIC federal grant and policies governing the use of funds obtained through rebate or other sources.

The WIC Program has a long history of reducing or maintaining food costs through the competitive procurement of foods; competitive selection of retail vendors; food brand and container size limitations that do not affect the nutritional value of the food benefits; aggressive fraud and abuse control. The savings from these proactive efforts accrue to the food portion of the WIC grant. Funds available for direct services to the additional caseload made possible by these efforts, lag or do not exist. The bottom line—states contain or reduce costs only to be forced to return the savings to USDA because there are inadequate resources to assess and certify participants, provide nutrition education, assess and refer for a host of Congressionally mandated health and social needs, and issue food benefits.

States need to be allowed to use cost-savings revenues in the same way as grant funds or other program income. Identifiable and predictable food cost savings could be considered as funds returned to the entire WIC grant and not just the food grant; each state would then be able to direct a portion of these funds to NSA services, capping at a preset rate such as the current NSA grant ratio. In addition, cost savings could be used to bring states up to "parity" or "potential" NSA formula grant levels. The NSA to food ratio for conversion could be adjusted when appropriations cannot fund full NSA grants, such as has happened in preliminary fiscal year 1997 funding.

Only in this way will states have a real opportunity to develop the infrastructure, staffing and outreach capacities needed to bring WIC services to the eligible women and children who could be served through the states' creative food cost savings initiatives.

The National Association of WIC Directors, NAWD, remains available to answer any questions you may have. Please feel free to contact the Association's Executive Director, Douglas Greenaway should you require further information or assistance.

PREPARED STATEMENT OF TERESA MAURER, PROJECT MANAGER, APPROPRIATE TECHNOLOGY TRANSFER FOR RURAL AREAS (ATTRA) PROGRAM, NATIONAL CENTER FOR APPROPRIATE TECHNOLOGY (NCAT)

Mr. Chairman, and members of the Subcommittee on Agriculture, Rural Development, Food and Related Agencies, I appreciate the opportunity to offer written testimony. I am Teresa Maurer, Project Manager for the Appropriate Technology Transfer for Rural Areas (ATTRA) program, a national information service based in Fayetteville, Arkansas.

ATTRA is funded through Rural Business-Cooperative Service (RBS) of the U.S. Department of Agriculture. ATTRA is operated by the National Center for Appropriate Technology (NCAT). NCAT is a private, nonprofit organization which provides information and technical assistance in the areas of sustainable agriculture, energy efficiency and resource-efficient housing. The USDA budget requests \$1.3

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million for the ATTRA program for fiscal year 1998. Today I am presenting supportive information for that figure, but wish to recommend that the program be funded at the level of \$1.5 million to provide additional capacity for meeting the demand for information on successful marketing approaches for sustainably produced agricultural products.

ATTRA is nationally accessible through a toll free 800 telephone number. We respond to requests from farmers, information providers and other agricultural professionals seeking information and technical assistance on a wide range of sustainable agriculture practices. ATTRA was initially authorized in the 1985 Farm Bill and was first funded in 1987. Since that time, ATTRA has responded more than 100,000 requests for information, reaching that milestone in late March, 1997. In fiscal year 1996 alone, ATTRA received 18,246 requests. This figure primarily includes many new callers, as well as many who have used the service in the past, and underscores the continuing and growing interest and need for ATTRA's services.

The program offers callers from across the US a unique, cost-free one-stop access point to research-based and practical-experience-based information about ways to farm with innovative techniques and technologies that combine environmental and economic benefits. With changes in recent agricultural legislation, farmers want information on a variety of creative options that may be available to them to carry out on their farm. They are exploring what they can produce, how they might produce it, and how they can add value and market their products—through ATTRA they learn about approaches they may not even be aware of. Farmers also continue to look for practices that help them keep more of their farming income by reducing production costs. The written materials provided by ATTRA's 25 staff members meet those informational needs and bring choices right to the caller's mailbox, helping them make their own important farming and economic decisions.

Caller requests cover a wide range of sustainable topics, including crop, livestock and horticultural practices and include questions on production approaches, soil fertility, pest management, adding new enterprises, etc. Much of the research results and farmer-to-farmer information that is relevant to these questions on improving sustainability is not readily available from a single source. ATTRA meets this need by providing vital and timely information.

In addition to accessing information from hundreds of periodicals, research reports and electronic databases, we have developed a unique national network of sustainable agriculture practitioners, researchers and extension specialists with whom we have ongoing contact. This network allows ATTRA to get information on innovative or changing practices and technologies out quickly and directly to farmers.

ATTRA also enhances the "reach" of traditional sources of agricultural information. In fiscal year 1996, about 35 percent of ATTRA's requests for information for sustainable approaches to agricultural production came from Extension, various government agencies, agribusinesses and universities. For example, an extension agent in Maryland reported that he uses ATTRA information to assist new and diversifying farmers in identifying various opportunities for horticultural and agronomic enterprises in their communities.

By working as educators and information providers, farmers share and spread information obtained from ATTRA to other farmers. A farmer from Pennsylvania reported "Researchers at two universities referred me to ATTRA. The research I received from ATTRA on sustainable poultry production, helped me to identify a prospective new market. I shared the information with other farmers." A farmer from Texas said "I was looking for personal testimony from an experienced farmer who had similar interests. The materials I received from ATTRA helped me to formulate a personal plan that I believe will be efficient, have a beneficial impact on the environment, and help improve the lives of my family and myself."

Returning to my earlier figures on interest and demand for ATTRA's services, I would like to offer a comparison between fiscal year 1989 and fiscal year 1996. In eight years, demand for information quadrupled from 4114 requests annually to 18,246 annually. In the same time period, our annual appropriation moved from \$500,000 to \$1,300,000 and has not been significantly increased in the past five fiscal years. In fact, the fiscal year 1996 funding rate was cut by almost 10 percent but requests increased 12 percent during that year. In the past two years, we have seen a doubling in the growth rate of requests from farmers desiring marketing information to be included as part of ATTRA's production information.

As a result of our program's gains in popularity, staff are now having difficulty meeting demands for information from producers—increases in real costs have actually decreased the resources we have available to meet farmers' diverse information needs. The 15 percent increase requested, from \$1.3 million to \$1.5 million would help staff meet demand and increase service in important new ways. That percentage is small compared with the 425 percent increase in demand we have experi-

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enced during the past 5 years of level or reduced funding. However, that funding level would indeed offer the program limited but significant capabilities to meet farmers' increasingly complex needs for information as they face the millennium. For example, many farmers (or their children) have increased electronic access, either in their own homes or at a local public facility. More callers now are asking for immediate electronic access to some of our materials. Additional funding would allow us to expand and maintain a Website which is being tested now and is planned to be available to the public later this summer.

We are convinced that ATTRA provides a national service that is very valuable to broadening the acceptance of more sustainable and profitable approaches to agriculture. We appreciate the past support that Congress has provided, which enables this unique service to provide information that helps farmers make wise decisions among choices they face. We urge you to continue to support this work, and we pledge to continue to improve the efficiency of the program and the quality of information we offer to farmers.

I have appreciated the opportunity to provide testimony and will welcome any questions you may have about this program.

PREPARED STATEMENT OF THE NATIONAL CENTER FOR RESOURCE INNOVATIONS

As ever, we appreciate this opportunity to provide, testimony to the Senate Appropriations Subcommittee on Agriculture, Rural Development and Related Agencies.

The National Center for Resource Innovations (NCRI) was established in 1990 through a joint private/federal initiative in an appropriation to USDA/Cooperative State Research Service. The consortium now includes six sites, one designated fixture site, and an Administrative Office in Rosslyn, VA. Each site in the consortium provides a unique expertise to this national program. NCRI capabilities include integration of large data sets in a GIS framework from the national level down to the farm field, weather analysis, land use planning, resource management at the state and local levels, and support for public and private policy development. The seven sites are:

- NCRI-Chesapeake: NCRI Chesapeake, Inc., Rosslyn, VA
- NCRI-South West: The University of Arkansas—Fayetteville, AR
- NCRI-South East: The South Georgia Regional Development Center, Valdosta, GA
- NCRI-North Central: The University of North Dakota—Grand Forks, ND
- NCRI-North West: Central Washington University, Ellensburg, WA
- NCRI-Great Lakes: The University of Wisconsin—Madison, WI
- Future Site: The University of New Mexico—Albuquerque, NM and the Southwestern Indian Polytechnic Institute (SIPI).

MISSION OF MCRI

To provide collaborative and innovative transfer of geographic information systems technologies to support local government and other public policy development and decision making.

NCRI FUNDING HISTORY AND MATCHING FUNDS

In the past, NCRI has consistently requested \$1 million annually for minimum program operations. Federal funding for NCRI increased from \$500,000 in 1990 to \$1.075 million in 1994. Rescissions and other adjustments reduced actual funding from \$1.075 to \$939,000 for fiscal year 1996 and again reduced the appropriations for fiscal year 1997 to \$844,000

COST/BENEFIT ANALYSIS

At the request of Congressman Joe Skeen, the six NCRI sites independently generated site specific cost/benefit analyses. The average benefit/cost ratio for NCRI's program is \$7.40 for every federal dollar received from USDA/CSREES funds. A copy of an updated cost/benefit analysis will be made available to the Subcommittee in the coming weeks.

CURRENT FUNDING LEVEL AND FISCAL 1998 FUNDING

The current level of funding (fiscal year 1997) for NCRI is \$844,000. NCRI requests that funding through the USDA/CSREES be restored to the 1992 of \$1,200 million for fiscal year 1998 to include \$100,000 to bring the University of New Mexico-Southwestern Indian Polytechnic Institute consortium formally into the NCRI program.

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BACKGROUND

NCRI is a cooperative, coordinated network with its agenda implemented through its corporate offices in Rosslyn, VA. NCRI operates primarily at the nexus of government where filed level information systems have been built and academic centers where GIS technology and educational techniques are often developed. NCRI's program bridges the widening gap under a mandated reorganization of government. The advantage of a consortium of regional centers is that each site has unique expertise and shares specialized technical support with other sites, thereby strengthening the project as a whole through shared resources and experience needed to build complex and comprehensive information systems. Site-to-site technology transfer and networking builds NCRI's overall capabilities, aids in problem solving and facilitates consistency and avoids duplication.

NCRI SITE EXPERTISE AND ACCOMPLISHMENTS

NCRI-Chesapeake, Inc. (NCRI-CB).—NCRI-CB builds cooperative integrated information systems “from the nation to the neighborhood” with federal and state agencies, universities and others to provide new information for better decision making. These systems focus first, on the farm, productivity and the farmer in their own very specific neighborhoods as related to natural systems and their socio-economic position on the landscape.

In addition to extensive Public Education and Outreach in the past, NCRI-CB has the following accomplishments to report:

- Applied private sector, commercial target marketing techniques to build sub-county clusters from integrated farm, socio-economic and environmental characteristics and prototype public sector target marketing of USDA's conservation and technology programs.
- Developed informational materials to promote understanding about Precision Farming and related technologies as an important new way to optimize farm productivity, efficiency and environmental protection.
- Cooperated with the Washington Post to present new images and data describing loss of farmland to suburban expansion in an 18 county region surrounding Washington DC to the year 2020. Images are installed on the Post homepage (www.washingtonpost.com) for downloading, analysis and educational use by readers.
- Provided images and data describing two hundred years of historical population and farmland expansion/decline from 1790–1990 to the National Biological Survey's Land Use History of North America Homepage (www.nbs.gov/luhna). Researchers, educators and individuals can download text, information about data sources, and images for their own use.
- Expanded regional-scale analyses of agro-eco indices from the Chesapeake watershed to the northeast and mid-atlantic regions to describe farm production systems with higher spatial precision for targeting public and private conservation/technology programs.

University of Arkansas-Fayetteville (NCRI-SW).—NCRI-SW has been based at the University of Arkansas at Fayetteville since its inception in May of 1990. Through university support and hardware and software grants, the program has a fully-equipped research, training, and outreach facility capable of demonstrating a wide range of software for geographic information systems, remote sensing, spatial statistics, and database management. In the fall of 1994, expansion of the Center's facilities was completed to include five state-of-the-art teaching and research laboratories, ten offices, and a library/reading room. A variety of advanced computer equipment now facilitates the center's teaching, outreach, and cooperative project capabilities. NCRI-SW continues to focus on technology transfer through training, the development of statewide GIS databases, and representative projects demonstrating the cost benefits and efficiency of GIS technology.

The NCRI-SW program has provided opportunities for cooperation and support to a wide range of communities:

- Arkansas Tornado of March 1997. With data provided by the National Weather Service, NCRI-SW provided maps correlating the storm route with community infrastructure and housing to the Arkansas' Governors office. In cooperation with the Arkansas Forestry Commission, staff used airborne videography and GPS to do near-real-time detailed mapping of the tornado damage;
- Arkansas Hazard Mapping. A joint project between the Arkansas Forestry Commission and the Center will provide a statewide hazard map based on vegetation fuel types, rural volunteer fire departments, transportation networks, and locations of known hazardous sites;

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- Vision 2010 Program. In cooperation with the Cooperative Extension Service, many of the state's utilities, the State Chamber of Commerce and others, the Center has developed the Vision 2010 Program. This program brings together leaders of seven rural counties in the state and, over a two year program, provides them with information and access to a variety of technologies that can improve their communities;
- High Accuracy Reference Network (HARN). Along with the Arkansas Highway and Transportation Department and the National Geodetic Survey, the Center is coordinating statewide HARN implementation which will greatly improve accessibility to National Geodetic Reference System monuments and improve local surveying;
- Arkansas Delta Agricultural Landuse Mapping. With funding provided by the Arkansas Legislature, NCRI-SW staff are preparing a detailed agricultural land use/land cover map for the 27 counties of the Arkansas Mississippi River Deltas.

South Georgia Regional Development Center (NCRI-SE).—NCRI-SE's program is an integral component of the South Georgia Regional Development Center—a regional agency that supports local governments across ten counties. NCRI-SE's primary objective is to encourage the use of geographic information for ecologically responsible decision making in this primarily rural region. "Real world" presentations by NCRI-SE using actual local geographic data has proven to be an effective method of demonstrating the value of GIS. This, coupled with the experience gained by NCRI-SE personnel from implementing GIS for local governments, has proven invaluable to government managers in the south east region. NCRI-SE also provides direct technical and "hands on" advice and training for any regional entities working in the GIS realm.

NCRI-SE in the past year has added these to its accomplishments:

- Completing Ben Hill County parcels and roads for local tax office;
- Completion of City of Fitzgerald, GA GIS including roads, parcels city limits and zoning;
- Added utility meter locations to current GIS for Adel, GA;
- Delivery of Parcel GIS to Cook County tax office;
- Added soils and trees coverage to current Cook County GIS.

University of North Dakota-Grand Forks (NCRI-NC).—NCRI-NC's interdisciplinary research and technology transfer programs are located and supported at the University of North Dakota Regional Weather Information Center. From this facility, NCRI-NC is linked to the UND Aerospace Scientific Computing Center which houses a CRAY J90. The resource issues in the region are related to the enhancement and protection of farming and ranching which are principal contributors to the region's economy. The work performed by NCRI-NC and the Regional Weather Information Center has resulted in their being recognized by the Ford Foundation as a semifinalist in the 1995 Innovations in American Government Awards Program.

NCRI-NC has the following accomplishments to present:

- Developed GIS designed and implemented strategy for Grand Forks Air Force base low level flight hazards GIS system;
- Provided proof of concept for insurance industry on damage assessment from Doppler radar and GIS data integration;
- Provided technical knowledge and assistance for Grand Forks City and County emergency management personnel on the acquisition and implementation of a GIS system;
- Provided weather related information to North Dakota congressional delegates for legislative decision making;
- In the process of providing Red River basin wide flood information via the Internet. This will include detailed maps and hot links to real time data;
- Participated in "The State of Education in Grand Forks, Kindergarten through Ph.D.", community based, interactive session, on what NCRI is all about;
- Participated in the University of North Dakota's "Creativity and Leadership Institute" with a short course entitled "Applications of Remote Sensing and GIS";
- Education and outreach was augmented this year with technology transfer to a local High School through their science club. This initial pilot group has an interest in Geographical information Systems (GIS) for use with chemistry and biological studies. Through training with GIS software, chemical and biological measurements within a local ecosystem can now be brought together and spatially referenced. This transfer of technology will be continued so that the technology is used across the entire curriculum. This technology validates the entire process of science, from collection of georeferenced data through to the analysis of the information.

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Central Washington University (NCRI-NW).—NCRI-NW continues to concentrate on the local and regional resource issues of the Yakima valley and eastern Washington. These issues include irrigation of agricultural lands' county planning needs, Native American interests, and the management of inter-mixed public and private lands. NCRI-NW works in close cooperation with the faculty and staff of Central Washington University as well as the GIS Lab.

The items listed below are noteworthy accomplishments of NCRI-NW:

- Completed digital soil surveys for Yakima, Asotin, Kitsap, and Okanogan Counties and the Snoqualmie Pass Area. These digital soil surveys are available to public agencies for use in land use and Growth Management Act planning, and will be a critical component for precision farming in the region;
- Completed several mapping projects for bird populations on the Hanford Nuclear Reservation. Studies will play a role in the future management of the Hanford Reservation and the Hanford Reach of the Columbia River;
- Provided mapping and analysis to assist with Bureau of Reclamation Teanaway River Project. This project is identifying water rights that can be leased or purchased to return water to the river to enhance salmonid habitat;
- Completed mapping and project for the Chelan County Conservation District. Results will be used in the Districts future planning.

University of Wisconsin-Madison (NCRI-GL).—The NCRI-Great Lakes project site is located at the Land Information and Computer Graphics Facility (LICGF) at the University of Wisconsin-Madison in the College of Agricultural and Life Sciences. The Facility was instituted in 1983 to function as a research, teaching, and outreach resource in land and geographic information systems (LIS/GIS). Researchers at LICGF explore uses of LIS/GIS for local and regional land and resource planning to support social, economic, and environmental decision-making processes.

NCRI-GI has added the following accomplishments to its roster of achievement:

- A four-hour satellite LIS/GIS distance education program for local governments was conducted on April 11, 1996. About 75 sites across the U.S. joined the program;
- LIS/GIS training for a variety of local governmental entities was expanded in our LICGF training facility;
- Continued determination of factors that encourage the implementation of automated LIS/GIS at the local level. A longitudinal survey is conducted annually to monitor adoption and diffusion of LIS/GIS at the county level;
- Results of innovations and benefits resulting from the Wisconsin Land Information Program (WLIP) were published nationally in *GeoInfo Systems* (October 1996);
- Work continues on the transfer of use of parcel scale tax assessment data as a tool for local land use and resource planning and management;
- This fall (1996), LICGF affiliates began a year long seminar entitled "Planning Wisconsin: Exploring the Role of LIS/GIS Technology." The focus of the seminar is to share with the university community, state, and federal agencies and other interested parties our experiences in the use of LIS/GIS through our website.

University of New Mexico.—The University of New Mexico (UNM) has been a future site of NCRI and has received small amounts of income from NCRI during that time. The personnel have been active in the development of New Mexico's state Geographic Information Systems (GIS) standards and the founding of the state's GIS Data Clearinghouse. NMERI has participated in various related committees, task forces, and programs aimed at bringing GIS and related technologies into wider use to solve real world problems.

Currently UNM has the following items as goals for the coming year:

- Cooperating with the Southwestern Indian Polytechnic Institute (SIPI) in a grant-funded UPWARD BOUND program for first generation college bound students;
- Producing a demonstration project which would disseminate precision farming techniques to Indian Reservations in Northern New Mexico;
- Cooperating with SIPI to produce and disseminate curriculum and Internet based teaching tools in Agricultural Science;
- A joint venture with SIPI to design, develop, and implement a comprehensive training and certification program in GIS, GPS, and Remote Sensing technologies for high-potential Native American students.

COOPERATIVE INITIATIVES

NCRI is immensely proud of its unique and effective national program that is producing better resource information systems in collaborative and cooperative efforts. We have accomplished much in our short lifetime and look forward to continuing

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work for increasingly better public policy and decision making leading to sustainable communities and resources.

Senator Cochran, we appreciate this opportunity to provide testimony to the Senate Appropriations Subcommittee on Agriculture, Rural Development, and Related Agencies. The current level of funding (fiscal year 1997) for NCRI is \$844,000. NCRI requests that the current level of funding through the USDA/CSREES be restored to \$1.2 million for fiscal year 1998 to bring on board the University of New Mexico.

PREPARED STATEMENT OF W. RON ALLEN, PRESIDENT, NATIONAL CONGRESS OF
AMERICAN INDIANS

INTRODUCTION

Greetings Chairman Cochran, Senator Bumpers and distinguished members of the Agriculture Appropriations Subcommittee. Thank you for the opportunity to submit a statement for the record regarding the fiscal year 1998 agriculture program needs in Indian Country. My name is W. Ron Allen. I am the Chairman of the Jamestown S'Klallam Tribe of Washington State and President of the National Congress of American Indians (NCAI), the oldest, largest and most representative Indian organization in the nation. The NCAI was organized in 1944 in response to termination and assimilation policies promulgated by the federal government which proved to be devastating to Indian Nations and Indian people throughout the country. NCAI remains dedicated to advocating aggressively on behalf of the interests of our member tribes on a myriad of issues including the critical issue of adequate funding for Indian programs.

BACKGROUND INFORMATION

It is a rare occasion indeed, if ever, when Indian programs receive the federal funding required to fulfill the needs of Tribal members. Historically, Indian funding has lagged far behind that of non-Indian funding. This gap continues to grow, creating heavier burdens upon Tribal governments to deliver basic services to their members. Compared to all other sectors of the American populace, American Indians and Alaska Natives rank at or near the bottom of most social and economic indicators. Of the 557 federally-recognized Indian Tribes, a great majority of their populations are characterized by severe unemployment, high poverty rates, ill-health, poor nutrition and sub-standards housing. In 1989, the average unemployment rate in Indian Country was 52 percent, and by 1990 the rate had jumped to 56 percent.¹ The 1990 Census shows the percentage of Indian people living below the poverty line is 31.6 percent, or three times the national average. As one of its first priorities, the 105th Congress must critically review the budget reductions for Indian programs and reverse the downward direction the appropriations process has taken towards those programs.

The inadequacy of federal funding is especially true in the current budgetary era when the Congress and the nation have resolved to reduce and eliminate federal deficit spending. Local empowerment, the theme of the 104th Congress' federal downsizing and budget balancing initiative, was initially met with optimism by Tribes who considered this an opportunity for Congress to help nurture economic opportunities throughout Indian Country—that increased Tribal infrastructure development and other economic development opportunities would be harmonious with federal government's streamlining efforts. However, what Tribes were offered was the complete opposite. Budget cuts and welfare reform legislation have created a critical need for infrastructure and economic development opportunities on Indian lands, opportunities that the Senate Subcommittee on Agriculture Appropriations is in a unique position to provide. With current federal spending on Indian programs representing less than one percent (1 percent) of the total federal budget, Congress should look elsewhere for savings to reduce the federal deficit and hold harmless the rights and opportunities of the independent sovereign Tribal nations for which Congress has a solemn duty to protect and provide for under the Constitution of the United States.

THE FISCAL YEAR 1998 INDIAN AGRICULTURE BUDGET REQUEST

In 1996, Congress passed and the President signed into law the Federal Agriculture Improvement and Reform Act of 1996 ("FAIR", Public Law 104-127). This

¹See generally "1990 Census of Population—Characteristics of American Indians by Tribe and Language", U.S. Department of Commerce, Economic and Statistics Administration, Bureau of the Census.

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law provides new mandates for the Department of Agriculture's Rural Development mission on infrastructure, housing, and business needs in remote areas. FAIR also recognizes the needs of Tribal governments for capital and infrastructure and authorizes a 3 percent set-aside for tribal infrastructure, housing, and related rural development projects. FAIR requires state-tribal "strategic plans" as well as separate Tribal "strategic plans" to include a detailed needs assessment as well as other factors involved with rural development.

Securing adequate appropriations for these programs is the key to their success in Indian Country. NCAI, along with Tribal governments and other Tribal organizations have been urging the Department of Agriculture and the Clinton Administration to request appropriations sufficient fund the 3 percent set-aside, as well as critical technical assistance, in the department's fiscal year 1998 budget request. The Agriculture Department has asked for Tribes to submit their needs assessments for economic and infrastructure development planning by March 1, 1997. Secretary Glickman addressed the NCAI Executive Council in Washington, D.C. about FAIR and the need for infrastructure initiatives in Indian Country. The Secretary indicated the department would look into providing technical assistance to Tribes to comply with FAIR, and would consider extending the March 1, 1997 deadline to allow tribes the time to participate in the 5-year period beginning in fiscal year 1998, which begins on October 1, 1997. However, we understand that the deadline was not extended and we do not know how many Tribes were able to meet this deadline.

Additionally, on March 12, 1997, the NCAI submitted to your office questions to be asked to under-Secretary Jill Long Thompson who was scheduled to testify before the Subcommittee the following day. These questions surrounded the 3 percent set-aside funding mandate, as well as the Department's position on extending the March 1, 1997 deadline for the submission of Tribal "strategic plans." In order to further ensure full tribal participation in FAIR, I urge Congress to support an appropriated 3 percent set aside, earmarked for tribal strategic plans development, technical assistance, and other Tribal needs associated with full Tribal participation in FAIR.

Along with Rural Development, other areas such as Natural Resource Conservation and Environment programs; Cooperative State Research, Education and Extension Services programs; and Food, Nutrition, and Consumer Services programs must all be funded at the maximum levels to ensure that the greatest tribal participation rates are achieved. The NCAI asks that the Subcommittee support the funding levels outlined in the President's request for the following programs that impact tribes.

Natural resources conservation services

- Zuni River Watershed Project—\$300,000;
- Outreach to Socially Disadvantaged Farmers Program—\$10 million (full funding level, CRAT Recommendation);
- Environmental Quality Incentive Program—\$300 million (with \$100 million targeted for assistance to minority and limited resources farmers, ranchers, and Indian nations, CRAT Recommendation).

Cooperative state and research, education and extension

- 1994 Institution Endowment Fund—\$4.6 million;
- 1994 Institution Strengthening Payments—\$1.45 million;
- 1994 Institution Extension Competitive Grants—\$5 million;
- 1994 Institution Institutional Capacity-Building Grants—\$1.7 million;
- Indian Reservation Extension Agent Positions—\$8 million;
- Adjust budget recommendations, develop statutory and regulatory changes, to eliminate disparate funding of the 1890 and 1994 land-grant institutions (CRAT Recommendation);
- Require land-grant institutions and major USDA programs to give priority to the research and educational needs of the socially disadvantaged, (CRAT Recommendation).

Rural development

- Rural Community Advancement Program—\$689 million;
- Rural Utilities Assistance Program—\$100 million (targeted annually from the Rural Utilities Service Water and Waste Disposal grant program to Indian Tribes, CRAT Recommendation);
- Distance Learning and Medical Link—(Target funds to Indian nations);
- Dedicate one-third of the Fund for Rural America to servicing the needs of socially disadvantaged customers (CRAT Recommendations).

The Food Distribution Program on Indian Reservations (FDPIR) is another very important program in Indian Country which requires the attention of the Sub-

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committee in developing adequate funding levels. The impacts of welfare reform on tribal communities will surely create additional increases in the needs for commodities distribution, and therefore, the President's request of \$75 million should be considered the minimum level of funding for fiscal year 1998.

Tribes are not seeking handouts, they are seeking opportunities. The FAIR Act's tribal set-aside along with other USDA funding authority for tribal programs and services will provide those opportunities. Housing, infrastructure, and other community development provisions currently authorized by law must be followed through with adequate funding authorization by this Subcommittee.

CONCLUSION

Mr. Chairman, we urge the Senate to fulfill its fiduciary duty to American Indians and Alaska Natives and to uphold the trust responsibility, which includes the fulfillment of health, education and welfare needs of all Indian Tribes in the United States. This responsibility should never be compromised or diminished because of any Congressional agenda or party platform. Tribes throughout the nation relinquished their lands as well as their rights to liberty and property in exchange for this trust responsibility. The President's fiscal year 1998 budget acknowledges the fiduciary duty owed to tribes. We ask that the Senate consider the funding levels in the President's Budget as the minimum funding levels required by Congress to maintain the federal trust responsibility and by Indian Country to continue on our journey toward self-sufficiency. This concludes my statement. Thank you for allowing me to present for the record, the position of the National Congress of American Indians in regards to the President's fiscal year 1998 Budget. I will be happy to answer any additional questions for the record that you may have.

PREPARED STATEMENT OF RUSSELL C. NOTAR, PRESIDENT AND CEO, NATIONAL COOPERATIVE BUSINESS ASSOCIATION

Mr. Chairman, members of the committee, we appreciate the opportunity to present testimony as you prepare to consider appropriations for the Department of Agriculture for fiscal year 1998. I would like to discuss today our active support for rural economic development through a network of cooperative development centers, to recommend that Cooperative Services at USDA might play a more vital role in all such economic development if its authority were expanded to include service to all rural cooperatives rather than just farm cooperatives, and to suggest that an expanded role for Cooperative Services will require additional resources.

The National Cooperative Business Association (NCBA) is proud of its role in assisting the creation of a network of rural cooperative development centers across the country. We know that you are equally as proud of that achievement within the federal government, in that the USDA's Rural Cooperative Development Grants program has also supported this network in its efforts to revitalize rural America through the development of cooperatives.

The program I am referring to was originally authorized by section 2347 of the 1990 farm bill as a program of Grants for Technology Transfer and Cooperative Development. In fiscal year 1993, this committee began to provide funding for the program, and report language over the years has indicated your strong support for the concept of using this funding for the purpose of creating a network of centers for rural cooperative development.

NCBA and its members, along with other supporters of cooperatives around the nation, joined together as the National Rural Cooperative Development Task Force to advocate for support for a national network of centers and to develop the linkages among the centers and between the centers and local partners to sustain the network's development. NCBA also launched the CLUSA (our former name) Institute for Cooperative Development to coordinate our development efforts and focus resources on cooperative economic development. The CLUSA Institute is now working with ten regional centers providing vital technical assistance and support for the development of cooperative enterprises in rural America.

Last year, Congress demonstrated its strong commitment to the centers approach when it passed the FAIR Act, also known as the 1996 farm bill. The program is now called Grants for Rural Cooperative Development in section 747(c)(4) of Public Law 104-127. The program focuses on supporting "nonprofit institutions for the purpose of enabling the institutions to establish and operate centers for rural cooperative development." It is authorized to provide funding at \$50 million per year. The new statutory language defines the goals of these centers as "facilitat[ing] the creation of jobs in rural areas through the development of new rural cooperatives, value added processing, and rural businesses."

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With the support of funding received from the program over the past few years, the rural cooperative development centers we work with have demonstrated quantifiable results. Centers in different regions of the country have given crucial help to the formation of farmer cooperatives building value added processing facilities, community development credit unions, partnerships among cooperative financial institutions, flexible manufacturing networks, and cooperatives providing housing and child care for impoverished farmworkers. I am including a copy of a document entitled "Best Practices for Cooperative Development: Defining, Communicating and Replicating Success" with this testimony. This narrative describes some of these projects the centers have undertaken and the concrete results they are achieving.

This coming year, centers will be involved in replicating successes they have achieved and breaking new ground in areas where cooperative development is needed. The electricity industry is rapidly being deregulated in every part of the country. Consumer-owned rural electric cooperatives have provided reliable and affordable electricity to rural Americans since the rural electrification program began directing federal resources for them in the 1930's. Once again, a small federal investment can provide essential assistance to develop consumer-owned energy purchasing cooperatives so that Americans are able to provide themselves with access to electricity. Centers are providing the opportunity for people to own and control these cooperative businesses.

The President has proposed allocating \$1.7 million in his budget for this program. Though these funds would indeed provide important support for the centers' endeavors, additional funding would have a far greater impact. In fiscal year 1996, 87 proposals submitted for program funding qualified for approval under USDA's selection criteria. The total amount of funding requested for these meritorious applications was \$13 million. The Administration recognized the importance of this program when it requested that \$5 million be allocated to it for fiscal year 1995.

We believe that \$5 million in funding for the program would be a wise and cost-effective use of the limited funds available for rural development in the federal budget. Each dollar invested in cooperative development has a multiplier effect which results in increased benefits for the U.S. economy.

Let me turn now to Cooperative Services. For decades, this office, formerly known as Agricultural Cooperative Services, has provided invaluable technical assistance and basic information that has furthered the creation of new cooperatives. As the federal government diminishes its role in supporting rural economies through commodity price support programs, it is critical that some of that funding be reallocated to promoting alternative forms of economic development in rural America.

Legislation has been circulating within USDA, and will be coming to the Hill soon, that would pave the way for an expanded role for Cooperative Services by allowing it to assist in the creation of all types of new cooperatives in rural areas. We support that as being a vital contribution to the work being undertaken by the network of centers. We hope that along with the new authority, Cooperative Services will be given the resources it needs to maintain its ongoing work while accepting these new responsibilities.

NCBA is a national cross-industry membership and trade association representing cooperatives—over 100 million Americans and 47,000 businesses ranging in size from small buying clubs to businesses included in the Fortune 500. Founded in 1916 and known for many years as the Cooperative League of the USA (CLUSA), NCBA's membership includes cooperatives in the fields of housing, health care, finance, insurance, child care, agricultural marketing and supply, rural utilities and consumer goods and services, as well as associations of cooperatives. NCBA's mission is to develop, advance, and protect cooperative enterprise.

PREPARED STATEMENT OF THE NATIONAL COUNCIL OF FARMER COOPERATIVES

The National Council of Farmer Cooperatives (NCFC) appreciates very much this opportunity to share its views regarding the fiscal year 1998 agriculture appropriations bill, and respectfully request that this statement be made a part of the official hearing record.

OVERVIEW OF NCFC

The National Council of Farmer Cooperatives (NCFC) is a national trade association representing nearly 100 regional marketing, supply and credit cooperatives, along with 31 state councils. Included among these regional cooperatives are over 4,000 local cooperatives with a combined membership of nearly 2 million individual farmers.

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These farmer-owned cooperative businesses are engaged in virtually every facet of agriculture. This includes handling, processing, marketing and exporting of U.S. produced agricultural commodities and related products; the manufacture, distribution and sale of farm supplies; and the providing of credit and related financial services, including export financing for, and on behalf of, their farmer owners.

SUPPORT FOR FARMER COOPERATIVES

For farmers, such cooperative self-help efforts provide the opportunity to reduce risks, capitalize on market opportunities and earn a greater return on their productivity and investment. Earnings derived from such business are returned to the cooperative's farmer owners on a patronage basis, which also helps contribute to local and regional economic activity as well as the national economy. Another important contribution is reflected in the fact that these cooperatives businesses also employ nearly 200,000 people with a combined payroll of approximately \$5 billion. Many of these jobs are in rural areas where employment opportunities are sometimes limited.

Looking to the future, we believe the ability of farmers to join together in such cooperative self-help efforts will become even more important. This is especially true as a result of several ongoing trends, including changes in farm policy under the new Federal Agriculture Improvement and Reform (FAIR) Act of 1996. There is now an even greater need to help ensure that farmers and their cooperatives are able to: (1) better manage the risks and uncertainty inherent in production agriculture; (2) capitalize on new market opportunities, including moving more into value-added production and processing; (3) compete more successfully in a global marketplace still characterized by subsidized foreign competition, and (4) help maintain and create needed jobs in communities throughout rural America.

RURAL BUSINESS-COOPERATIVE SERVICE

For these reasons, we strongly recommend that funding and staffing be strengthened for USDA's Rural Business-Cooperative Service (RBS) and its related programs aimed at achieving these important objectives. Such action would help ensure that USDA is fully able to carry-out its historical mission as mandated by Congress in support of farmer cooperatives.

EXPORT PROGRAMS

We also believe it important to maintain and strengthen funding for USDA's export programs, including the Market Access Program (MAP) and Foreign Market Development (FMD) Cooperator Program. We strongly urge that MAP be funded at no less than \$90 million for fiscal year 1998 as recommended by the Administration and that FMD be funded at a level of \$30 million (with additional funds as necessary to meet forward funding requirements); and we endorse the recommendations of the Coalition to Promote U.S. Agricultural Exports of which NCFC is a member.

Such programs have been tremendously successful and extremely cost-effective in expanding U.S. agricultural exports, countering subsidized foreign competition and protecting American jobs. They have also helped encourage and strengthen the ability of farmers to join together in cooperative efforts to promote their products in overseas markets and improve their income. Administered on a cost-share basis, they remain one of the few tools available to help American agriculture and American workers remain competitive in a global marketplace still characterized by subsidized foreign competition.

AGRICULTURAL RESEARCH

Another important area of emphasis when it comes to enhancing the global competitiveness of farmer cooperatives and American agriculture is research. It is equally important to help ensure that farmer cooperatives and American agriculture can continue to help provide consumers at home and abroad with a dependable supply of safe, high quality food and fiber at reasonable prices, while meeting important environmental and food safety objectives. This includes recognition of the need to help farmers, their cooperatives, and others engaged in agriculture meet the goals and requirements of such statutes as the Food Quality Protection Act (FQPA), the Clean Water Act (CWA), the Safe Drinking Water Act (SDWA) and the Clean Air Act (CAA), among others.

To help meet these challenges, we believe every effort should be made to help maintain and strengthen the highly successful public-private partnership involving USDA, the land grant universities and colleges, and the private sector. This in-

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cludes providing needed funding at the federal level through USDA and ensuring that such funding helps achieve the important objectives outlined above.

CONSERVATION/EQIP

We strongly support continued funding for the Conservation Reserve Program (CRP), as well as Environmental Quality Incentives Program (EQIP), as recommended in the Administration's budget. Such programs are necessary to help achieve and maximize water quality and other environmental benefits. The CRP and EQIP programs in particular are critical to empowering farmers to continue voluntary efforts to sustain the natural resource base and to respond to societal expectations and demands with regard to water quality and protecting our natural resource base.

CROP PROTECTION/PESTICIDE PROGRAMS

The Administration's budget request includes funds for Integrated Pest Management (IPM) programs and IR-4 program to collect and analyze data on pesticide residues through the Pesticide Data Program (PDP); as well as funds for a consumption survey intended to improve information about children's food consumption patterns to be used by EPA.

With regard to this request, we endorse the comments being submitted by the Minor Crop Farmer Alliance (MCFA) of which NCFC is a member of its executive committee. USDA's role in this process is critical if the Food Quality Protection Act (FQPA) is to be implemented as intended by Congress.

In brief: (1) USDA is uniquely qualified to (a) gather and provide data to the EPA regarding pesticide use and dietary consumption patterns, and (b) to provide information about crop protection needs and efficacious and affordable alternatives; and (2) USDA has statutory obligations to carry-out regarding minor use pesticides pursuant to FQPA, including establishment of a minor use office and revolving fund to facilitate grower efforts to provide information needed to maintain or develop label uses. However, the Department must have the necessary resources to carry out such responsibilities.

MEAT INSPECTION/USER FEES

We are also concerned over the Administration's user fee proposal relating to Food Safety and Inspection Service (FSIS) meat inspection. Such meat inspection programs provide important public benefits relating to food safety and quality and should continue to be publicly funded. Farmers through their farmer-owned cooperatives are already contributing to meeting important food safety and quality requirements through investment in new Pathogen Reduction Hazard Analysis and Critical Control Point (HACCP) Systems for meat and poultry. The imposition of new user fees, to the extent that such fees could not be passed on to consumers, would impose an additional cost burden on farmer cooperatives and their farmer members, and reduce farm income. Again, in recognition of the public benefits of such programs and the need to maintain confidence in the safety and quality of such products, the federal government should maintain its historic role.

CONCLUSION

Mr. Chairman, on behalf of NCFC and its members, we want to again thank you for the opportunity to share our views with regard to the fiscal year 1998 agriculture appropriations bill. We recognize the difficult challenges facing you and your Subcommittee in the current budget environment. At the same time, it is important to recognize the contribution to deficit reduction that agriculture has made in recent years.

In concluding, we also wish to take this opportunity to express our appreciation to you and the members of the Subcommittee for your interest and support of farmer cooperatives and American agriculture.

PREPARED STATEMENT OF THE NATIONAL DRY BEAN COUNCIL

STRATEGIC PLAN FOR U.S. BEAN RESEARCH

Dry & Snap bean (*Phaseolus vulvaris* L.) are versatile short season, high value food crops that niche well into shorter production seasons of the northern and intermountain states, providing vital alternatives to growers where crop options are limited. Beans offer the consumer a healthy, tasty and inexpensive food choice as either low fat, low calories vitamin/mineral rich green bean pods or as a protein rich

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source of complex carbohydrates and fiber in a variety of canned and dry bean products differing in color, size, shape, and flavor. Clinical studies have documented that the soluble fiber or pectin content of dry bean seed has potent effects in the prevention and treatment of chronic medical conditions such as cardiovascular disease, diabetes mellitus, and obesity, hypertension, cancer and diseases of the digestive tract. Beans are currently endorsed by the American Heart Association, the American Cancer Society, and the American Diabetes Association. The beans are touted by these Agencies as the fiber food of the 1990's. The canning and freezing industry for both seed and pod types is diverse and located across the country offering employment outside the 20 major production states. The same processing industry which cans over half the dry bean crop as beans in either clear brine, sauce with pork, or chili has seen an increase in production in the last 10 years of 10 million cases. This volume represents an increase of \$160 million to a current value in excess of \$900 million.

Production

Phaseolus dry edible beans are planted on approximately 1.5 million acres (1.1–2.6) in the U.S. Production fluctuates around 26.7 million hundred weight (cwt) annually, ranging from 19 million cwt in 1988 to over 32 million cwt in 1990, 1991, and 1995. On-farm value of this crop ranges from \$350 to \$700 million, depending on the season and price. The major production states ranked in order of acreage are: ND, MI, CO, NE, CA, ID, MN, WY, WA, NY, and KS. Ten dry bean commercial classes are produced in the U.S. and these are differentiated by color, size and shape of the bean.

In addition to production of Phaseolus dry beans, green bean, or snap bean production occurs in several regions of the U.S. (approximately 220,000 acres), with an estimated value of \$110M annually. States leading in snap bean production for processing are WI, OR, IL, MI, NY and ID. Snap beans for fresh market are grown primarily in FL, with smaller acreage in NJ, AR, and TN. Snap beans for fresh market are grown on approximately 80,000 acres nationwide with an additional value of \$80 million annually.

Utilization and exportation

Approximately 60 percent of the total U.S. dry bean production is consumed nationally. Over 90 percent of the navy bean crop is processed as canned baked beans, while only 20 percent of the pinto bean market class is processed as a canned food. Dry bean consumption has increased from 5.7 to 7.2 lbs. since 1984. This represents a 26 percent increase which is largely due to the recognition of the food and health value of beans.

A large share of the U.S. dry bean production is now targeted at export markets. Exports peaked in the early 1980's at over 12 million cwt. Currently, 40 percent of the U.S. production is exported with certain commercial classes grown exclusively for export. Cultural preferences in certain export markets for specific commercial classes of dry bean allows for diversification of U.S. dry bean agricultural production. Bean exports have played an important role in reducing the balance of payment deficit the U.S. suffers in world trade. Bean exports are becoming increasingly important because they are an indispensable protein source in Latin America and many developing countries particularly those in East Africa. Their value in famine relief in these countries is vital. The array of seed types currently grown in the U.S. makes beans an important choice to meet the energy and protein needs of estimated 21 million people at risk of death from starvation and disease in Central Africa.

CURRENT SCOPE OF U.S. BEAN RESEARCH

A major strength of the U.S. economy is its agricultural production. Stable U.S. agriculture production helps maintain a vibrant economy because food costs to consumers can be kept low yet still profitable to the producer. In addition, agricultural exports contribute substantially to reduce trade deficits. Continued U.S. dominance in agriculture will require major efforts to improve both crop productivity and quality while stabilizing or improving the physical environment. This process will allow U.S. agriculture to supply both domestic and world markets with affordable, high quality products and preserve precious natural resources for future generations. These efforts can only be accomplished by investing in strong agricultural research technologies. Beans can only continue to be a vital part of the U.S. agricultural economy if research to keep them competitive with other commodities continues.

The number of state and federal scientist years (SY's) devoted to bean research in the U.S. in all disciplines is approximately 27 (20 SY's—dry beans, 7 SY's—snap beans). The specific locations of the larger programs are shown on the attached table, along with the agencies involved, SY's, and primary research emphasis at

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each location. A network of federally-supported USDA positions were established through the Agricultural Research Service (ARS) in the 1920's to support both public and private programs dedicated to dry bean and snap bean research. The ARS research mission for beans is to solve specific high priority problems of a national scope. A national research mission cannot be addressed by any single Agricultural Experiment Station. Moreover, since the bean industry is regionalized, ARS is in a better position to develop the necessary research teams to address problems that extend far and beyond state and regional boundaries. The national leadership extended by ARS scientists in areas of pathology, germplasm maintenance and enhancement and food quality genetics has strengthened the entire bean industry nationally. The present national bean research effort is operating at a minimal level but is effective because of the unique collaboration among state, federal and industry partners, fostered in part by the Western Regional W-150 project and nurseries and the Phaseolus Crop Advisory Committee.

A National Bean Research Task Force (NBRTF) has been formed to identify needs and concerns within the research community and to make recommendations to correct the deficiencies. The task force recognizes and appreciates the continued federal support for the ARS bean research positions at Prosser, WA; Beltsville, MD; and Mayaguez, PR, and for the increase in funding for the ARS food quality genetics position at E. Lansing, MI, but NBRTF is concerned by the lack of critical research areas of bean pathology. New and more virulent strains of bean pathogens have made a major onslaught in several bean production areas. There is critical need for research to characterize the new pathogens and develop strategies for resistance in the plant.

The NBRTF requests that the National Dry Bean Council (NDBC) lobby for support for federally supported research programs which are currently under funded and for the creation of a new position to solve critical problems caused by foliar, bacterial and fungal pathogens.

USDA—AGRICULTURAL RESEARCH SERVICE BEAN RESEARCH WORKERS AND FACILITIES

Goals and recommendations for fiscal year 1998

The National Dry Bean Council (NDBC) is urging Congress to approve funding in fiscal year 1998 for the USDA Agricultural Research Service (ARS) Plant Science Program that increases funding from fiscal year 1997 levels to the \$300,000 required by ARS to fund a CRIS project. This will enable the ARS to provide adequate support for these bean scientists.

Specifically, the NDBC is recommending Congress address the following priority needs in bean research.

Operations budget

1. Maintain the current ARS bean viral pathology position at Prosser, WA with the \$300,000 level of funding required by ARS to maintain a viable CRIS project. This position will enable ARS to effectively conduct research on common bean virus problems and resistance breeding and expand activities on bean root rots and allow ARS to address critical needs pertaining to disease resistance in the major bean seed production area in the U.S.

2. Appropriate an additional \$80,000 in fiscal year 1998 for the under funded ARS bean fungal pathology position at Beltsville, MD. The appropriation will bring the funding of this position up to the \$300,000 level required by ARS to maintain a viable CRIS project and enable the scientist to effectively conduct his research on bean rust pathology and genetics and expand activities on bean golden mosaic virus recently introduced into the U.S. and allow the ARS to successfully refill the position upon the retirement of the scientist.

3. Appropriate an additional \$300,000 in fiscal year 1998 for the ARS Sugar Beet and Bean Research Unit, Michigan State University, East Lansing, MI to correct a critical federal need in bean pathology, particularly in the area of foliar bacterial and fungal pathogens namely common blight, halo blight, bacterial brown spot, anthracnose, and white mold disease pathogens. The appropriation will enable the hiring of a bean bacteriologist/microbiologist to conduct the needed work pursued formerly by the late Dr. Saettler in the area of bean pathology. This critical position has been vacant for several years.

Background

A well-balanced approach to the nations's bean research needs requires the maintenance of a team of ARS bean research workers in diverse disciplines including genetics, germplasm enhancement, germplasm evaluation, pathology, quality, and molecular biology. In order to maintain an adequate team of ARS bean research workers, it is important that ARS research workers presently engaged in bean research

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not be redirected to other crops and that vacancies created by retirements and deaths be filled and these programs maintained for bean research.

During the period from 1970 to 1990, the number of USDA-ARS bean research workers declined substantially, from 13.0 to 5.0 positions, a decrease of 56 percent. This decline severely hampered the ability of ARS to meet national bean research needs, and the SAKS to meet state bean research needs.

The total ARS budget increased by 67 percent from fiscal year 1980 to fiscal year 1990 while the bean appropriation remained constant at just under \$1.6 M. Total bean appropriations as a percent of total ARS budget in fiscal year 1980 was 0.43 percent which dropped to 0.25 percent by fiscal year 1990.

Unfortunately, the number of ARS bean researchers is again on the decline, due to the untimely death of Dr. Saettler in East Lansing, MI and the impending retirements of incumbents at the USDA, Prosser, WA and Beltsville, MD facilities. Action by Congress is needed to restore the national ARS bean research team to a level that can meet the nation's bean research needs.

In a real sense, the bean industry (dry and snap beans), although vitally important in specific other geographic regions, does not have the resources of the major crops to establish pathological or basic mission oriented expertise in every region where beans are grown. The USDA can mend this void by maintaining the vital network of scientists currently working and dealing with important regional pathogens, problems and opportunities which are of a national importance.

USDA/ARS BEAN PATHOLOGY RESEARCH POSITION PROSSER, WASHINGTON

The ARS BEAN Project at Prosser, Washington has been long standing with a presence under the legacies of D.W. Burke and M.J. Silbernagel. Under the leadership of these scientists, programs were developed to study the pathogenic variability of common bean mosaic virus (BCMV) and the introgression of diverse resistance genes into snap and dry bean germplasm, and the development of screening techniques for germplasm enhancement of root rot complex pathogens. The ARS Prosser, WA bean project has released over 10 snap bean lines and 18 dry bean lines in six distinct market classes. A number of the dry bean lines have become successful dry bean varieties in the West and Intermountain states (CO, ID, and WA) and the upper-Midwest (ND). The dry bean varieties developed by ARS, Prosser, WA have generated about \$1 billion in income to farmers in the Pacific NW over the past 20 years. Othello pinto bean is grown on about 50 percent of the pinto acreage in the west and intermountain region and has generate \$68 million revenue in the state of Idaho in the last 5 years. The ARS Prosser, WA bean project is currently under the leadership of Dr. Phillip Miklas who in addition to screening for root rot and introgressing genes form diverse germplasm, is conduction basic genetic studies on the resistance to different strains of BCMV, bacterial blight, rust and white mold. Mr. Miklas has developed effective cooperative research efforts with ARS and SAKS scientists at several locations in the US and Puerto Rico, and commercial plant breeders in CA and ID. Over 90 percent of the foundation and certified bean seed (dry and garden) is produced in California, Washington and Idaho. The ARS bean project at Prosser, WA has saved the Western bean seed industry considerable sums of money that could have been lost to disease epidemics. Over the years the facilities at Prosser, Washington have evolved to a point where there is an excellent infrastructure in which dry bean disease and germplasm enhancement research is conducted productively, efficiently, and has garnered a wide customer base. A rapport has been established with this customer base that is extremely supportive of ARS research efforts. In addition, nurseries have been established that facilitate long term research on the complex of bean root rot organisms and curly top virus.

Recommendation

In order to meet the President's budget requirements for ARS in fiscal year 1998, the Vegetable & Forage Crops production Research unit has been slated for closure. Under this plan, there is talk of moving bean research to Pullman, WA. The NDBC calls on ARS to maintain bean research at Prosser, WA and fund this project at \$300,000, the ARS guideline for programs. Prosser is near the bean production area and several long term nurseries have been established at or near Prosser to conduct bean pathology research. Many of the facilities at the Prosser Station have been developed to conduct bean research and are highly suitable to conduct the "cutting-edge" research that is fundamental to Dr. Miklas' CRIS. There are sufficient greenhouses to conduct the genetic introgression work and disease screening efforts.

The NDBC thinks its at a "water shed" in regards to federal support for bean research. Over the years ARS bean research positions have eroded to the point the NDBC wonders whether a critical mass of federal scientific expertise exists in the USA to conduct the type of research vitally needed to keep our industry healthy.

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The NDBC urges Congress to maintain this vital ARS position and insure funding at \$300,000 in fiscal year 1998 for this position.

USDA/ARS BEAN FUNGAL PATHOLOGY RESEARCH POSITION BELTSVILLE, MARYLAND

Dr. J.R. Stavely, full-time ARS Research Plant Pathologist at Beltsville, devotes 100 percent of his research effort to the study of fungal pathogens attacking beans. Historically, Dr. Stavely has studied the foliar fungal pathogen causing rust disease in dry and snap beans. Dr. Stavely has developed important technologies for introgressing rust resistant genes into adapted and useful germplasm. He is also studying the new viral disease, Bean Golden Mosaic Virus, introduced in 1993 in South Florida. This disease has the potential to "wipe-out" the snap bean industry in Florida.

This highly productive ARS project has released 43 processing and 15 fresh market snap beans and 24 dry bean germplasm lines in three market classes. Research has focused on the introgression and pyramiding of resistance genes into both snap and dry beans as the most effective control of the variable rust pathogen. This long-term germplasm enhancement project involves identification of novel sources of resistance present in the USDA Plant Introduction collection, incorporation of these resistance genes, both individually and as groups, into snap bean and several dry bean market classes, and field evaluation of elite material in major production areas. In addition, basic plant pathological studies on the epidemiology and genetics of the rust fungus are conducted. The current project leader cooperates effectively with other USDA scientists, SAKS researchers in at least nine states, and commercial plant breeders. This position serves the national needs for bean research in the area of fungal pathogens attacking beans and provides leadership to SAKS and industry and snap bean breeding efforts.

Dr. Stavely's position is currently under funded, with a major portion of the funding utilized for salaries and greenhouse rental, leaving very little for research operating costs. An increase appropriation of \$80,000 is needed to enable Dr. Stavely to effectively conduct his research, by bringing his CRIS into line with the \$300,000 level of funding required by USDA.

Recommendation

The NDBC calls on ARS to maintain the program in bean rust pathology germplasm enhancement research at Beltsville, MD and expand the program into anthracnose disease pathology and study the bean golden mosaic virus disease. Increased funding to current ARS level of \$300,000 per year would allow this project to perform at optimum efficiency to develop improved rust, anthracnose, and bean golden mosaic resistant germplasm lines. An increased emphasis on the genetics of pathogen virulence will offer insights on the development of strategies needed to obtain stable rust and broad based genetic resistance to variable fungal and viral pathogens.

The NDBC urges Congress to appropriate an additional \$80,000 in fiscal year 1998 for this position to bring the funding level to the \$300,000 required by ARS to maintain a CRIS.

USDA/ARS BEAN PATHOLOGY RESEARCH POSITION EAST LANSING, MICHIGAN

There is a urgent need to create a new position in bean pathology at E. Lansing, MI recognizing that an increase in bacterial diseases is negatively affecting bean production in the Midwest and intermountain areas. An ARS Plant Pathology position addressing national problems caused by foliar bacterial pathogens was closed-out in 1992 due to the untimely death of then incumbent (Dr. A.W. Saettler). There are no funds to "backfill" this position. Dr. Saettler worked to determine the molecular and genetic basis of host and non-host resistance to the bean common bacterial blight pathogen, *Xanthomonas campestris* pv. *phaseoli*, develop molecular and immunological diagnostics to determine the epidemiology and population biology of common and halo bacterial blights, and design alternative control strategies, including biological, chemical, and cultural practices that will complement the move toward sustainable agricultural practices.

Dr. Saettler was an international expert on foliar bacterial pathogens of beans. he was the only bean pathologist in the USA (either SAES or Federal) that had an active and comprehensive research program on foliar bacterial pathogens of beans. Dr. Saettler's research contributed positively and significantly to several of today's highest national priorities as established by the National Research Council. In that position at E. Lansing, Dr. Saettler contributed to the development of 17 dry bean cultivars in five major market classes and he actively cooperated with other state and private bean research programs. The bean research community needs a patholo-

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gist working full time on foliar bacterial pathogens. The work could best be done by ARS because of the national scope of the problem. This position must be funded at the \$300,000 level to meet ARS guidelines for CRIS positions.

Recommendation

The NDBC calls on ARS to create a new position in bean pathology at East Lansing, MI, at the level of funding commensurate with ARS guidelines. A qualified scientist should be recruited to fill the bean bacteriology position as soon as possible.

The NDBC urges Congress to appropriate an additional \$300,00 in fiscal year 1998 for the creation of the new position.

LOCATION OF DRY AND SNAP BEAN PROGRAMS, SCIENTIST YEARS (SY) INVOLVED, AND KEY WORDS FOR MAJOR RESEARCH AREAS

Location	Agency	SY	Major research areas
Dry beans:			
Beltsville, MD	ARS	0.5	Pathology, Rust Variability.
Davis, CA	State	2.5	Breeding, Mapping, Agronomy, Pathology.
E. Lansing, MI	ARS	1.0	Quality Genetics.
	State	1.5	Breeding, Processing Quality, Agronomy.
Fargo, ND	State	3.0	Breeding, Pathology, Quality, Molecular.
Ft. Collins, CO	State	2.0	Breeding Pathology.
Gainesville, FL	State	0.4	Molecular Mapping.
Ithaca, NY	State	0.4	Processing Quality.
Lincoln, NE	State	2.0	Breeding, Pathology.
Madison, WI	State	0.3	Pathology, Molecular.
Mayaguez, PR	ARS	1.0	Germplasm Enhancement.
	State	1.5	Breeding, Genetics, Pathology.
Pullman, WA	ARS	0.4	Germplasm Collection.
	State	0.3	Nutrition.
Prosser, WA	ARS	0.5	Pathology, Breeding.
Scottsbluff, N. Platte, NE	State	0.7	Agronomy, Pathology.
St. Paul, MN	State	0.4	Genetics, N-fixation.
Twin Falls, ID	State	1.5	Breeding, COB Nursery, Pathology.
Snap beans:			
Beltsville, MD	ARS	0.5	Pathology, Rust Variability.
Charleston, SC	ARS	0.5	Breeding, Adaptation Nursery.
Corvallis, OR	State	2.0	Genetics, Interspecific, Breeding.
Gainesville, FL	State	1.2	Breeding, Pathology.
Geneva, NY	State	1.0	Breeding, Genetics, Pathology, Mapping.
Madison, WI	State	1.0	Breeding, Molecular.
Prosser, WA	ARS	0.5	Breeding, Pathology.
St. Paul, MN	State	0.4	Genetics.
Total	ARS	4.9	
	State	22.1	

PREPARED STATEMENT OF THE NATIONAL EASTER SEAL SOCIETY

The National Easter Seal Society appreciates the opportunity to report on the substantial accomplishments of the USDA AgrAbility Program, and comment on the challenges and choices confronting over a half million people with disabilities who work in agricultural production. AgrAbility offers farmers, ranchers, and farmworkers with disabilities and their families the critical assistance that they need to stay productive in agriculture and active in rural economic and community life.

Easter Seals strongly recommends that the USDA AgrAbility Program be reauthorized. Continuation and expansion of AgrAbility is in the best interests of America's agricultural and rural communities. Notably, the 1990 Farm Bill statutory provision that established AgrAbility remains relevant and requires only minor updating.

The AgrAbility Program is an essential, unduplicated, hands-on resource for farmers, ranchers, and farmworkers with disabilities. It is the only USDA program dedi-

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cated exclusively to helping disabled agricultural producers. It demonstrates the value of public-private partnership by securing donations of funds, talent, and materials to magnify the impact of a modest federal investment.

Small, but damaging, reductions in funding over the last two years resulted in a fiscal year 1997 appropriation of \$1.91 million, down from \$2.0 million in 1995. Regrettably, this decline may trigger a net loss of one or more existing state-level projects, and shuts out the dozen states seeking AgrAbility funds to initiate needed services. For this reason, Easter Seals encourages subcommittee members to advocate for increased funding for AgrAbility in fiscal year 1998 and beyond to assure the viability and capacity of existing AgrAbility projects, and address significant unmet need in currently unserved states.

The need for the AgrAbility Program has never been greater, and its accomplishments to date are remarkable by any standard. Please accept Easter Seals' recommendation that AgrAbility be continued through the 1997 reauthorization of federal agricultural education and research programs, and expanded through an increased allocation of \$4.0 million in fiscal year 1998. The justification for this action and related information follows.

DISABILITY & AGRICULTURE

Agricultural production is one of the nation's most hazardous occupations. Each year, approximately 200,000 people working in agriculture experience injuries that limit their ability to perform essential farm tasks. In Mississippi, for example, this means that 12,400 Mississippians working in agriculture are injured annually, with a significant percentage incurring permanent disabilities. Tens of thousands more across the country become disabled as a result of non-farm injuries, illnesses, other health conditions, and the aging process. Nationwide, approximately 500,000 agricultural workers have physical disabilities that prevent them from performing one or more essential farm tasks. Estimates of disability among farmers are often as high as 15 percent of all agricultural producers, as in Kentucky, where 13,350 or 15 percent of farm operators have physical or cognitive disabilities, and another 8,200 have disabling conditions that make farming difficult.

For many of these individuals, the presence of a disability jeopardizes their rural and agricultural futures. Rural isolation, a tradition of self-reliance, and gaps in rural service delivery systems frequently prevent agricultural workers with disabilities from taking advantage of growing expertise in modifying farm operations, adapting equipment, promoting farmstead accessibility, and using assistive technologies to safely accommodate disability in agricultural and rural settings. Yet, with some assistance, the majority of disabled agricultural workers can continue to earn their livelihoods in agriculture and participate fully in rural community life.

AGRABILITY'S ROLE & RECORD OF SUCCESS

The AgrAbility Program was established under the 1990 Farm Bill. The Farm Bill authorizes the Secretary of Agriculture to make grants to state extension services for conducting collaborative education and assistance programs for farmers with disabilities through state demonstration projects and related national training, technical assistance, and information dissemination. The program combines agricultural know-how with disability expertise to provide people with disabilities working in agriculture with the specialized services that they need to safely accommodate their disabilities in everyday farm operations. AgrAbility received strong bipartisan support during the 1996 Farm Bill reauthorization, and was extended through fiscal year 1997.

Under the statute, state and multi-state AgrAbility projects engage Extension Service agents, disability experts, rural professionals, and volunteers in offering an array of services, including: identifying and referring farmers with disabilities; providing on-the-farm technical assistance for agricultural workers on adapting and using farm equipment, buildings, and tools; restructuring farm operations; linking disabled farmers for peer support; providing agriculture-based education to prevent further injury and disability; and, upgrading the skills of Extension Service agents and other rural professionals to better promote success in agricultural production for people disabilities.

The USDA administers AgrAbility on a fair and competitive basis. Applications for state-level project funding are submitted annually to USDA for peer review and, if successful, qualify applicants for up to four years of support. At the end of a funding cycle, previously-funded projects compete on a level playing field with new applicants. Applications must demonstrate collaboration between a state extension service and one or more nonprofit disability organizations, and must propose a workplan

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that reflects priorities established by the Farm Bill. Every year, a dozen or more unserved states seek AgrAbility funding from USDA to initiate project services.

AgrAbility provides customized assistance to farmers, ranchers, and farmworkers with disabilities and their families. The nature and degree of assistance depends on the individual's disability needs and agricultural operation. For example:

—Charlie Gogel and his family raise corn, hogs, and turkeys on a 200 acre farm near Dale, Indiana. In 1994, Charlie experienced a stroke that caused him to lose the use of his right arm, limited his overall strength, and reduced his ability to do calculations in his head. The Indiana AgrAbility Project, carried out by Purdue University's Breaking New Ground Resource Center (BNG), assessed Charlie's situation and helped him make the modifications needed to keep him fully productive on his farm. BNG staff recommended fixing the cam grinder so that Charlie could operate it from his tractor, modified a loading chute for the corn planter, so that Charlie no longer has to lift heavy bags; and, facilitated installation of a hydraulic lift on his combine to help him get on and off safely. Extra steps were attached to his tractors to help get him into his seat.

—Kentucky farmer, Raymond Read, lost his left arm in a silage chopper accident three years ago. After several months of not being able to farm, Raymond was contacted by AgrAbility staff to explore his desire and ability to get back to work. AgrAbility staff helped provide Raymond with power steering for his large cattle truck, an all-terrain vehicle for use on the farm, and a special welding hood designed for one-armed individuals. With AgrAbility's help, Raymond is now able to top tobacco, weld, repair equipment, check his herd of beef cattle, and haul them to market. Mr. Read is just one of the 186 farmers with disabilities that received direct assistance from the Kentucky AgrAbility Project since its inception in 1993.

—LeRoy Haberl of Carroll, Iowa grows cam, soybeans, and alfalfa and has a 400-head cow/calf operation. A genetic disorder that began in childhood has left LeRoy legally blind, with 20/400 vision that allows him to see only peripherally. LeRoy was referred to the Iowa AgrAbility Project by the Iowa Commission for the Blind. AgrAbility staff have helped LeRoy modify tools and equipment and are currently working to secure a scanner to read documents and a voice-activated computer to help him manage the farm. Since 1992, LeRoy has volunteered his time and expertise to help other disabled farmers as an AgrAbility peer counselor. He is currently mentoring two men with 20/300 vision set up a calf-raising operation in southwest Iowa. For his accomplishments and volunteerism, LeRoy was named the 1996 Farmer of the Year by the Easter Seal Society of Iowa, which, together with the Iowa State University Extension Service runs the Iowa AgrAbility Project.

—Dave Kemper is a 41-year old dairy farmer in Huntington County, Pennsylvania. He comes from a family of dairy farmers. Nearly two years ago, Dave was involved in a car accident that damaged his spine and left him with severe back pain and a degenerative bone condition. After Dave's injury, his twelve-year old son Daniel tended the 30 head of dairy cattle, shouldering predawn and evening milking duties, while Dave himself could do little more than sweep-up and give the cows shots. Dave reamed of AgrAbility of Pennsylvania, a joint effort of Penn State University and the Central Pennsylvania Easter Seal Society, at an extension service workshop and, within three months, he was receiving equipment and making modifications that would make him a full-time farmer. Specifically, AgrAbility staff helped Dave secure a new shock-absorbing tractor seat that swallowed the jolts that would otherwise have forced Dave off his tractor within minutes. They identified a milking pipeline to carry fresh milk, a chore that Dave can no longer do. They also identified a skid loader for Dave to use to do anything from shovel feed to scoop manure to drive in fence posts. According to Dave, AgrAbility's help means that he can do 90 percent of everything that needs to be done. In its first two years, the Pennsylvania AgrAbility Project has assisted 60 to 70 farmers like Dave, who, with some guidance and support, can continue in production agriculture.

Since 1991, twenty-one states have been served by AgrAbility projects. In the aggregate, AgrAbility is estimated to have:

—Provided direct on-farm assistance to 5,000 farmers, ranchers, and farmworkers with disabilities and their families.

—Provided information and advice to 10,000 persons with disabilities employed in agriculture and related occupations.

—Educated over 100,000 agricultural, rehabilitation, and rural health professionals on safely accommodating disability in agriculture.

—Recruited and trained more than 1,000 volunteers to assist agricultural producers with disabilities and their families.

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—Reached approximately 6.1 million people through 3,200 exhibits, displays, and demonstrations to increase awareness of the challenges affecting and resources available to people with disabilities who work in agriculture.

CURRENT STATUS

In 1996, USDA received an allocation of \$1.97 million to support eighteen projects in nineteen states: Colorado, Idaho, Illinois, Indiana, Iowa, Kentucky, Minnesota, Missouri, Montana, Nebraska, New Jersey, New York, North Carolina, North Dakota, Ohio, Pennsylvania, South Dakota, Tennessee, and Wisconsin. The average grant award per state was \$85,000, which generally supported one-to-two persons (often part-time), at each partnering agency.

More than a dozen states have sought AgrAbility funding without success, including Arkansas, California, Georgia, and Washington. Other states, including Louisiana, Michigan, New Hampshire, South Carolina, and Vermont, had USDA-funded AgrAbility projects in the past and seek to re-establish their programs. Each of these states can demonstrate significant unmet needs among farm and ranch families affected by disability that AgrAbility could potentially address.

In 1997, USDA received \$1.91 million for AgrAbility. Easter Seals understands that the USDA received sixteen applications for AgrAbility project funding for fiscal year 1997. Only four awards are expected, so that, as noted earlier, the total number of AgrAbility projects in 1997 may drop to seventeen. It appears that fiscal year 1997 awards will be made to three established projects in Kentucky, Missouri, and Tennessee; and a new project will be launched in Mississippi. It does not appear that the dozen or so applications for current year funds to continue or initiate AgrAbility services in Arkansas, Vermont, Louisiana and other states were successful.

Easter Seals firmly believes that AgrAbility's lack of growth, even down-sizing, represents a tragic step backward in Congress' efforts to address staggering levels of unmet need among farm families affected by disability. Instead of limiting funding for AgrAbility, Easter Seals is encouraging House and Senate appropriations committees to double the federal investment. For too long, AgrAbility projects have been underfunded relative to need and objective. At \$85,000 per state, only a few staff can be hired to provide state-wide education and assistance to disabled farmers, educate rural professionals, recruit volunteers, and work with rural businesses on disability-related issues. Rising demand for services and the great distances that must be traveled to reach farmers and ranchers, severely strains even the most dedicated of AgrAbility's outstanding staff. Ultimately, failure to invest wisely and adequately in this worthwhile program will ultimately cause it to falter.

JUSTIFICATION OF REAUTHORIZATION AND FUNDING RECOMMENDATIONS

The National Easter Seal Society strongly believes that the USDA AgrAbility Program should be continued and expanded. Substantial unmet need among farmers with disabilities and the program's impressive track record to date warrant this action. The following points capture Easter Seal's Justification for reauthorization:

Cost-benefit.—AgrAbility generates practical solutions that enable people with disabilities to perform agricultural tasks safely and efficiently. Many solutions are low to moderate cost and can be fabricated on-site or locally, or obtained through networking available public and private resources. AgrAbility provides the strategic insights that promote self-help, peer support, and community responses to disability-related challenges. AgrAbility assistance helps prevent farmers from being forced out of farming and, in so doing, prevents the disruption to families and economic damage to rural communities that results. It is estimated that one rural business closes when ten farmers leave farming.

Rising demand.—Demand for AgrAbility assistance has skyrocketed since 1991. AgrAbility projects report waiting lists of farm families seeking assistance, and ever-greater numbers of requests for first-time and ongoing help from farmers, farm family members, agribusinesses, rural professionals, and the media. Many projects have cut back on educational outreach due to lack of resources. In states not served by AgrAbility, people with disabilities who work in agriculture receive information and advice via the mail and telephone. Because AgrAbility is a one-of-a-kind program, individuals interested in farming and disability have no alternative but to wait for assistance from AgrAbility staff. Lacking assistance, many disabled farmers employ unsafe or inefficient methods of accommodating their impairments, often leading to new or more serious disability. Mounting demand for assistance puts undue pressure on AgrAbility staff, who are already struggling to carry-out statewide program activities and attract new sources of funding to the program.

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Core project support.—The 1990 and 1996 Farm Bills recognize that a minimum of \$150,000 per state is required to support basic AgrAbility project activities. Unfortunately, no project has received this amount to date. Easter Seals is seeking an appropriation of \$4.0 million in fiscal year 1998, which would fund 21 state projects at \$150,000 per project, enabling each state to hire at least one full-time professional to provide on-the-farm assistance. On average, one staff person can conduct assessments and serve 30–40 farm families affected by disability annually, which represents the current number of farm families on waiting lists for services in most states.

Non-Federal support.—AgrAbility project staff regularly pursue private sector resources to augment Federal funds and thereby enhance the impact of the program. John Deere, Land 'O Lakes, Country Companies, Kraft Foods, Farmer's Union, Farm Bureau, Kellogg Foundation, and the American Corn Grower's Association are among the groups that have recently contributed to the program. Locally, individuals and businesses regularly donate money, materials, equipment, and expertise to help disabled farmers.

The National Easter Seal Society is proud to contribute to the ongoing success of the USDA AgrAbility Program. Easter Seals believes that the original 1990 Farm Bill provision establishing the program in 1990 and restated in 1996, still accurately defines its purpose, scope of activity, and funding authority. Easter Seals proposes very minor modification of this original statutory language and report language, as follows:

—Simplify funding authority for state-level projects and the national training, technical assistance, and information dissemination project by eliminating the distinction between state and national level activities. Nationally-coordinated activities should be authorized to receive approximately 15 percent of overall program support. Total funding authority for the program would be unchanged at \$6.0 million. This change reflects current funding levels and practices. Since 1991, Congress has appropriated a single amount for the program and USDA has apportioned that amount between the AgrAbility Program's two components: state-level projects and the national project providing training, technical assistance, and information dissemination.

—Easter Seals recommends report language be included that provides USDA AgrAbility Program administrators with discretion to contract directly with a national nonprofit disability service organization that solely, or in collaboration with a land grant university-based extension service agency, is charged with carrying out national-level AgrAbility activities. Currently, USDA awards a single contract for nationally-coordinated training, technical assistance, and information dissemination activities to an extension service agency, with the nonprofit disability organization as subcontractor. This arrangement is unduly cumbersome for the extension service agency and potentially limiting for USDA.

The AgrAbility Program is an excellent example of how a relatively modest investment of public resources can boost rural productivity and substantially improve the quality of life for thousands of rural Americans with disabilities. It strengthens rural America by investing in people who, despite having disabilities, are highly motivated to stay in food and fiber production. With project support, these individuals overcome disability-related barriers, work hard, and contribute much to the rural economy. Without support, such individuals might be forced out of farming into non-rural employment, underemployment, or joblessness.

Please ensure that the USDA AgrAbility Program is continued and expanded through the current reauthorization of agricultural research and education programs and the fiscal year 1998 appropriations process. AgrAbility is a valuable, one-of-a-kind public-private partnership that has the potential to serve agricultural producers with disabilities and their families across America. Thank you for considering Easter Seals' views and recommendations.

For information contact Randall Rutta, National Easter Seal Society 202/347-3066.

PREPARED STATEMENT OF THE NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION

The Diagnostic Imaging and Therapy Systems Division of the National Electrical Manufacturers Association is pleased to provide testimony on fiscal year 1998 funding levels for the Food and Drug Administration. NEMA, headquartered in Rosslyn, Virginia, is the nation's largest trade association representing the electroindustry. NEMA's Diagnostic Imaging and Therapy Systems Division represents more than ninety-five percent of U.S. manufacturers of X-ray imaging, computed tomography, magnetic resonance imaging, diagnostic ultrasound, and nuclear imaging equip-

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ment. In addition, the division represents manufacturers of picture archiving and communications systems, as well as manufacturers of extracorporeal lithotripters and radiation therapy equipment.

NEMA appears before the subcommittee today to express its strong opposition to the \$44.7 million in medical device user fees set forth in the administration's fiscal year 1998 budget submission. NEMA believes that these user fees are being used to camouflage severe reductions in FDA funding, and urges the members of the subcommittee to reject this hidden tax upon industry.

Under the administration's proposal, only \$107 million of the FDA's medical device program's overall budget of \$166 million would be funded by appropriated dollars. The remainder would be funded by user fees, including \$44.7 in medical device user fees. Absent the user fee revenue, and the agency's device program would be slashed by over \$40 million, resulting in severe reductions in the number of full time equivalent employees (FTE's). Clearly this a situation which holds the potential to severely undermine the agency's ability to protect the public health and safety.

FDA's rationale for requesting the additional user fee revenue rests upon the assertion user fee dollars would be used to enhance the agency's performance in a number of key areas, including product review times. Yet, by the agency's own estimate, product review times for 510(k) submittals are expected to increase by nearly 20 percent over fiscal year 1996 levels.¹ As this is the most common route to market for most innovations in medical technology, one is left to question the extent to which the increase in user fee revenue would lead to increased efficiency in agency operations.

Similarly, the agency's own stated performance goals call for the completion of first action on 80 percent of all 510(k) submittals within the first ninety days of the review cycle, as compared to actual fiscal year 1996 performance levels which indicate that the agency completed first action on 94 percent of all 510(k) submittals within ninety days. Furthermore, the agency's performance goals call for the completion of final action on 40 percent of all 510(k) submittals within ninety FDA days, as compared to an actual agency performance rate of 59 percent during the first nine months of fiscal year 1996.² Once again, it appears as if user fee revenue will be used to support diminished, rather than enhanced levels of product review performance for the agency.

Similar trends persist in the PMA and IDE areas. In the PMA area, for example, the agency's performance goals call for the completion of 35 percent of first actions on PMA submittals within 180 days, as compared to actual agency performance levels of 53 percent in fiscal year 1996. And with respect to PMA supplements, the agency calls for the completion of 55 percent of first actions on PMA supplements within 180 days, as compared to a performance level of 77 percent in fiscal year 1996. Finally, in the IDE area, FDA performance goals call for the completion of 90 percent of all IDE actions within thirty days, and the approval of 50 percent of all IDE submittals within the first review cycle. Compare this with actual fiscal year 1996 performance levels of initial action on 99 percent of all IDE's within thirty days, and final action on 73 percent of IDE submittals within the first review cycle.³ If diminished performance is to be the net result of user fee gains, one is left to ponder the agency's efficiency in its management of taxpayer dollars.

In past years, the subcommittee has had the wisdom to reject user fee proposals, correctly recognizing the proposal as a hidden tax upon industry. NEMA urges the members of the subcommittee to follow the same expeditious course of action this year.

Rather than impose a tax upon industry to fund FDA activities, NEMA believes that the true solution to the agency's funding dilemma lies in an increased reliance on independent scientific review organizations to perform many of the regulatory functions currently delegated to FDA. Specifically, NEMA envisions a public-private partnership for the regulation of medical devices. Under this scenario, enforcement responsibilities would continue to rest with FDA's Center for Devices and Radiological Health, along with the public health responsibilities of post-market surveillance, standards development (including global harmonization efforts), and education. Product review activities, as well as GMP inspections, would be assigned to independent scientific review organizations, which would function in a fashion similar to the notified bodies established under the recently adopted European frame work

¹ U.S. Department of Health and Human Services, "Justifications of Estimates for Appropriations Committees, Food and Drug Administration, Fiscal Year 1998" (Washington D.C.: U.S. Department of Health and Human Services, 1997), p. 87

² Ibid, p. 83.

³ Ibid, p. 84.

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for the regulation of medical devices. In the U.S., a variety of independent testing laboratories are equipped to perform this function, most notably Underwriters Laboratories.

NEMA takes this position for several reasons. First and foremost, experience has shown that the current framework for the regulation of medical devices lacks the flexibility and responsiveness necessary to adapt to the changing technological requirements of the twenty-first century. Recent backlogs in agency review of new product submittals provide compelling evidence of FDA's inability to keep pace with device innovation. The cumbersome nature of FDA's product review process is further exacerbated by the agency's inability to attract and retain qualified personnel. Charging independent scientific review organizations with the review of new product submittals and the task of conducting GMP inspections will create a competitive labor market for both product reviewers and field inspectors.

Similarly, delegating product review and quality assurance responsibilities to independent scientific review organizations will result in a competitive framework for the review of new product submittals, thus leading to greater efficiency in the product review process. As mentioned previously, enforcement responsibilities would remain vested with FDA, including the authority to ensure that independent reviewers maintain credible and ethical relationships with regulated industry. Not only would the implementation of independent scientific review expedite product review times, it would also better position FDA to enter into mutual recognition agreements with European nations, thus enhancing the global competitiveness of U.S. manufacturers. Finally, to the extent that independent scientific review organizations would be funded directly by U.S. industry, delegating product review and inspection responsibilities to independent organizations would result in considerable savings to the taxpayer, as public resources would no longer be expended on product review activities. If this system for product review were in place today, nearly \$64 million in product review costs could have been trimmed from the fiscal year 1996 FDA budget.⁴

Finally, delegating FDA's product review and enforcement functions to independent scientific review organizations will enhance the scientific and technical expertise available to the agency, enabling the agency to make use of the best and the brightest of today's scientific researchers. This, in turn, holds the potential to re-focus the product review process on product performance.

NEMA believes that the agency has an important role to play as protector of the public health and safety, and does not advocate the wholesale privatization of the agency; nor does NEMA advocate delegating specific aspects of the agency's regulatory authority to other agencies. Rather, NEMA envisions the agency working with the private sector in a collaborative fashion to ensure the safety of health care technologies. In short, NEMA envisions a public-private partnership which builds upon the strengths of the current system for the regulation of medical devices while at the same time providing the flexibility to adopt to the constant pace of medical innovation.

It is this public-private partnership which NEMA envisions as the mechanism for carrying the important work of the Food and Drug Administration forward into the twenty-first century. In such a fashion, the FDA can continue to fulfill its important mission of ensuring public access to safe medical technologies while at the same time fostering the competitiveness of the U.S. medical device industry, a world leader in product innovation.

PREPARED STATEMENT OF THE NATIONAL PHARMACEUTICAL ALLIANCE

Mr. Chairman and Members of the Subcommittee, the National Pharmaceutical Alliance is pleased to have the opportunity to present these comments on the fiscal year 1998 budget requests for the Food and Drug Administration. NPA is a national trade association consisting of more than 170 companies dedicated to manufacturing and distributing safe, effective and affordable pharmaceutical products.

PRESENTATION OVERVIEW

Generic drugs represent one of the most cost-effective means of controlling U.S. healthcare costs. For example, consumers, insurance carriers, and the U.S. government spent an estimated \$85.35 billion on approximately 2.41 billion drug prescrip-

⁴U.S. Department of Health and Human Services, "Justifications of Estimates for Appropriations Committees, Food and Drug Administration, fiscal year 1996" (Washington D.C.: U.S. Department of Health and Human Services, 1995), p. 33.

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tions in 1996 alone.¹ About half of those prescriptions were filled with generic versions of the prescribed drug.² Using conservative estimates, if generics were available for only one-third³ of the remaining 1.2 billion prescriptions, at 40 percent less than the price of the brand drug,⁴ the net savings would be \$5.6 billion annually.

While cost-effective generics have assisted in controlling health care costs in this country, additional savings could be realized if FDA reviewed generics within the statutorily required 180 days.⁵ With this potential for an estimated savings in health care costs of over \$5 billion annually, especially for lower income families, it is difficult to understand why generic approvals are not more of a government priority. Rather, in recent years, FDA has slowly and silently shifted its resources away from its generic approval program to other public health initiatives. This shift in agency priorities has created a governmental barrier that impedes approval and access to affordable generics.

NPA RECOMMENDATIONS TO EXPEDITE GENERIC DRUG APPROVALS

NPA commends this Subcommittee for including language in the Conference Report to its fiscal year 1997 Agriculture Appropriations bill that directed FDA to "use available funds to ensure compliance with its 180 day statutory review period for generic drug applications."⁶ NPA requests that the Subcommittee implement this report language in fiscal year 1998 by taking the following actions:

1. Appropriate \$13 million directly for the Office of Generic Drugs, in addition to its fiscal year 1997 funding level;

2. In the alternative, re-allocate \$13 million to OGD from FDA administrative of flees that oversee few, if any, programs with statutorily required deadlines;

3. As a further alternative, re-allocate sufficient funds to restore OGD FTE's to at least the fiscal year 1993 level of 155 FTE's;

4. As a final alternative, ensure that OGD and its programs maintain fiscal year 1997 funding levels in fiscal year 1998, despite the Administration's fiscal year 1998 budget request; and

5. Separately, require that FDA submit, as a line item, agency expenditures for, and by OGD.

TIMELY GENERIC APPROVALS WOULD SAVE CONSUMERS AND GOVERNMENT BILLIONS OF DOLLARS

NPA makes these recommendations because OGD often fails to meet its statutory obligation as to generic reviews, even though OGD has made valiant attempts to constructively utilize its resources and to streamline its generic approval process. Significant improvement in generic approval times will not occur through simple efficiency measures. Thus, a national commitment to substantially improve OGD's system is imperative.

Given the therapeutic and economic benefits of generic drugs, this nation's healthcare system, including its government entities, should further encourage the utilization and approval of cost-effective generics. It is estimated, for instance, that generic drugs typically enter the market at a price that is 25 percent less than that of the brand drug.⁷ Furthermore, within one year, the price of competing generics is estimated to be 45 percent below the brand; and at two to three years, the price will be 60 percent to 75 percent less than the brand drug.⁸ In 1996, the top 500 brand drug prices increased 4.1 percent, while the Producer Price Index and

¹ See IMS America, Inc. Sales and Prescription Data, cited in F-D-C Reports, Inc. ("The Pink Sheet"), Feb. 17, 1997, at T&G-16-17.

² See IMS International, Inc. Data, "Distribution of Prescriptions By Product Types" and "1995 New Prescriptions."

³ In support of our view that these estimates are conservative, the PRIME Institute estimates that a newly marketed generic drug captures 45 percent of the market within one year. See "Economic Impact of GATT Patent Extension on Currently Marketed Drugs," PRIME Institute, College of Pharmacy, University of Minnesota, March 1995, at Executive Summary.

⁴ From the time generic drugs are marketed, and for 3 years thereafter, generic prices are estimated at 25-75 percent below brand prices. See "Economic Impact," supra at footnote 4.

⁵ Under the law, FDA, through the Office of Generic Drugs, must review generic applications within 180 days. 21 U.S.C. §355(j)(4). Currently, OGD reviews only 55 percent of the ANDA's within that time (a 45 percent failure rate). See Generic Line, November 29, 1996, at 2-3 (Interview with OGD Director Douglas Sporn).

⁶ H.R. Rep. No. 104-726, 104th Cong., 2nd Sess., at 32 (1996) (accompanying H.R. 3603).

⁷ See "Economic Impact," Dora at footnote 3.

⁸ See id. A comparison of actual drug prices further illustrates these savings. For example, the 1996 wholesale brand price for Xanax 2 mg was \$140.32 per 100 tablets, while a generic wholesale price for the same product was \$12.24. See Red Book Update, Top Volume Rx Products, April 1996; McKesson's Multi-Source Complete Generics Catalog, Nov-Dec-Jan 1996.

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Consumer Price Index for that period increased only 2.5 percent and 3.0 percent, respectively.⁹ Remarkably, generic drug prices decreased by 12.6 percent in 1996.¹⁰

Lower-priced generics provide economic advantages to individual Americans, especially to senior citizens, the 40 million Americans without health insurance, and the underinsured who need access to affordable pharmaceutical products.¹¹ Without access to generics, economically disadvantaged patients may postpone treatment until their medical conditions are advanced or may fail to seek treatment altogether. Generics also benefit private insurance carriers, as well as the U.S. government, which purchases prescription drugs through the Veterans Administration, the Department of Defense, and Medicaid.¹² Thus, the government itself has a vested interest in ensuring proper funding for an effective generic review process. More efficient approval times would offset an increase in appropriations by providing the government with additional savings in prescription costs each year.

Yet, the enormous public benefits of safe, effective and affordable generics cannot be realized, unless and until, OGD's funding is increased and its primary reviewing staff is expanded. Given that under fiscal year 1997 funding levels, OGD is straining to maintain its insufficient approval rates, it would be counter-productive if OGD's funds were further reduced. Unfortunately, the Administration's proposed budget could have that result. Although the Administration's fiscal year 1998 budget request includes \$13 million in generic user fees,¹³ it appears that those user fees are intended to replace current program expenditures, with a net loss to OGD. NPA is vehemently opposed to such action.

OGD LACKS THE NECESSARY RESOURCES TO MEET ITS STATUTORY REQUIREMENTS

Despite the obvious economic savings of generic drugs, their approval is often delayed due to OGD's insufficient staffing, inadequate resources, and increased workload. OGD has experienced a steady increase in ANDA filings over the last few years, causing a substantial application backlog. In 1995 alone, approximately 411 ANDA's were submitted to FDA, an increase of almost 100 from 1994.¹⁴ An estimated 453 ANDA's were submitted in 1996.¹⁵ Yet, of these 1995 and 1996 filings, OGD annually reviewed only 302 and 351 filings, respectively.¹⁶ A significant reduction in this application backlog is unlikely, given OGD's limited resources.

While ANDA filings have increased, OGD staffing and resources have been slowly and silently shifted to other agency initiatives. For example, between 1994 and 1996, 14 staff members were transferred out of OGD; 8 of whom were directly responsible for reviewing applications.¹⁷ An additional 17 staff members were reassigned to other administrative duties outside OGD, depleting OGD's staff to 125 FTE's for fiscal year 1996.¹⁸ Moreover, this depleted staff has been working beyond expected capacity—giving 110 percent—often without overtime compensation.¹⁹ If OGD remains understaffed, low morale, “burn-out,” and workload limitations will continue to delay the marketing of cost-effective generics.

This trend must be reversed at once. Instead of funding discretionary health initiatives, agency resources should be infused into the generic review program to ensure timely approvals. For instance, FDA could fund a fully functional OGD pro-

⁹ See 1996 National Association of Chain Drug Stores PRIME Index and February 13, 1997, press release (tracking prescription drug prices charged to retail pharmacies by manufacturers); Bureau of Labor Statistics' 1996 Producer Price Index (tracking finished goods) and 1996 Consumer Price Index.

¹⁰ See Generic Line, November 29, 1996, at 4, citing IMS America data.

¹¹ See Employee Benefit Research Institute's Appendix to Issue Brief No. 179, “Sources of Health Insurance and Characteristics of the Uninsured” (Nov. 1996).

¹² The VA purchased \$1.1 billion in prescription drugs in 1996. DOD purchased \$834 million in prescription drugs that same year. The Medicaid program purchased approximately \$900 million in prescription drugs in 1994 for a vast number of the estimated 33.4 million people over 65 and 3.7 million over 85 years of age. See Testimony before the House Committee on Appropriations, Subcommittee on Labor, Health and Human Services and Related Agencies, by June Gibbs Brown, Inspector General, HHS, Feb. 12, 1997; “Current Population Reports, Population Estimates and Projections,” Series P-25, No. 1018, U.S. Dep't of Commerce, Bureau of Consensus, 1989 (June 23, 1992 Supplement) at 21.

¹³ See FDA fiscal year 1998 Justification of Estimates for Appropriations Committees, at 8, 11.

¹⁴ See “Office of Generic Drugs Overview,” FDA Speech to Annual Meeting of National Association of Pharmaceutical Manufacturers, February 2, 1996.

¹⁵ See “Practical Solutions to Streamlining the ANDA Process,” FDA Speech to Annual Meeting of National Association of Pharmaceutical Manufacturers, January 31, 1997.

¹⁶ See *id.*

¹⁷ See “OGD Overview,” *supra* at footnote 14.

¹⁸ See *id.*

¹⁹ See Generic Line, *supra* at footnote 5.

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gram for about 1.5 percent of its annual budgeted.²⁰ Alternatively, FDA could re-allocate 15 percent of the appropriated funds from four of its administrative support offices, having an fiscal year 1997 budget of \$85.41 million and 954 FTE's.²¹ Restoring OGD's FTE's to at least the fiscal year 1993 level would be even less costly. Without an economic infusion, generic approvals will continue to slowly trickle out of FDA.

INCREASED EFFICIENCIES IN THE APPROVAL PROCESS WILL NOT ACCELERATE APPROVAL TIMES

OGD has accomplished a lot with its existing resources over the last few years. Specifically, generic drug median approval times have improved from 34 months in 1992 to 23 months in 1996.²² These improvements occurred, despite a reduced budget and staff, by streamlining OGD's approval process. Program improvements, some of which were industry recommendations, have included electronic data filing, public bioequivalence protocol reviews, and efficient labeling procedures. Yet, OGD continues to fall short of its statutory responsibility to review generics within 180 days.

The latest OGD statistics reveal that only 12 percent of the applications submitted are approved within 1 year.²³ Almost half of the applications approved in 1996 languished at the agency for 2-3 years.²⁴ Given OGD's six-month statutory mandate, this approval delay is unacceptable. While NPA intends to continue its dialogue with OGD on other program improvements, further efficiency measures will not significantly impact approval times. Rather, OGD requires adequate funding and staffing to function effectively.

RATIONALE FOR APPROPRIATING ADDITIONAL FUNDS FOR OGD

NPA maintains that Congress must re-establish FDA's priorities by appropriating and allocating resources directly to OGD. Only Congressional mandates can ensure that FDA will reverse its past trend and invest the necessary resources to ensure timely generic approvals. The agency has admitted as much by initiating an agency-industry discussion on the possibility of utilizing user fees to supplement OGD funding. While NPA's membership remains divided on the user fee issue, it has authorized its Board of Directors to begin discussions with FDA on user fees.

One important aspect of the recent agency-industry meetings concerns the agency's estimate for additional OGD funding. Specifically, the agency has asserted that an additional \$13 million per year will enable OGD to review 90 percent of the generic applications within the 180 day statutory time frame.²⁵ Based on this figure, NPA requests that the Subcommittee appropriate \$13 million to OGD within the fiscal year 1998 budget, in addition to its fiscal year 1997 funding level. An increase in appropriations earmarked for OGD is essential to dismantle the existing governmental barriers impeding access to affordable generics. The effectiveness of generics in reducing healthcare costs while providing safe and effective products to this nation cannot be fully realized without direct OGD appropriations.

In closing, the NPA would like to thank the Subcommittee for its time and attention concerning this critical aspect of FDA's fiscal year 1998 budget requests.

PREPARED STATEMENT CHUCK GUNNERSON, VICE PRESIDENT, LEGISLATIVE/ GOVERNMENT AFFAIRS, NATIONAL POTATO COUNCIL

My name is Chuck Gunnerson. I am a potato farmer from Minnesota and current Vice President Legislative/Government Affairs for the National Potato Council (the Council). On behalf of the Council, we thank you for your attention to the needs of our potato growers.

²⁰ "Full" funding is based on FDA's preliminary request for \$13 million in user fees. See FDA's "Preliminary Concepts Under Consideration For a Generic Drug User Fee Program" (Nov. 1996). FDA's fiscal year 1997 budget was \$996 million. See FDA Talk Paper, "1998 Budget Proposal for FDA," February 6, 1997.

²¹ The four offices are the Office of the Commissioner, the Office of Policy, the Office of External Affairs, and the Office of Management and Systems, which have important functions but administer few, if any, statutorily required programs. See FDA fiscal year 1998 Justification at 97-99, *supra* at footnote 13.

²² See "OGD Overview," *supra* at footnote 14; "Practical Solutions," *supra* at footnote 15.

²³ This figure considers the time from submission of the application to the time of final agency disposition. See "Practical Solutions," *supra* at footnote 15.

²⁴ See *id.*

²⁵ See *id.* The proposed \$13 million budget for user fees would cover 92 FTE's for review and support personnel and other program operating costs. *Id.*

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The Council is the only trade association representing 10,500 commercial growers in 50 states. Our growers produce both seed potatoes and potatoes for consumption in a variety of forms. Annual production in 1995 was 442,531,000 cwt with a farm value of \$2.8 billion. Total value is substantially increased through processing. The potato crop clearly has a positive impact on the U.S. economy.

The potato is the most popular of all vegetables grown and consumed in the United States and in the world. Annual per capita consumption was 143 pounds in 1996 up from 107 pounds in 1962 and is increasing due to the advent of new products and heightened public awareness of the potato's excellent nutritional value. Potatoes are considered a stable consumer commodity and an integral, delicious component of the American diet.

THE COUNCIL PRIORITIES FOR FISCAL 1997 APPROPRIATIONS

The National Potato Council strongly urges that the Congress: (1) support Agricultural Research Service (ARS) funding for potatoes at fiscal year 1997 levels and continue to include report language urging that the ARS work with the National Potato Council in determining priorities, earmark an additional \$300,000 for the replacement of Dr. Joe Pavek, retiring plant breeder, at Aberdeen, Idaho, and oppose the USDA budget proposal to close ARS facilities at Prosser, Washington, and Orono, Maine. Much of the USDA research at Prosser has focused on reducing pesticide use through the development of pest resistant plants with genetic engineering. Eliminating USDA research at Prosser would appear to conflict with President Clinton's goal of helping minor crop producers find new ways to control pests while reducing pesticide use. The ARS lab in Orono is the only one in the northeast that approximates Maine's unique soil types and climatic conditions which are different from most other potato-producing areas. Maine is a humid area rather than arid with less than 10 percent of its production under irrigation. Closure of this facility would be disruptive to current research and marketing activities of the northeast. Considering current budget constraints, it is critical that the ARS, working with potato growers, is able to adjust current research to meet agreed upon priorities. This would allow for better program streamlining and effectiveness; (2) appropriate additional funds for a special grant under the Cooperative State Research Education and Extension Service (CSREES) to accelerate national efforts in breeding and varietal development to among other things eradicate or manage late blight disease. We urge that the CSREES Special Grant Program be increased from \$1.2 to \$2 million. We also support the Administration's budget request for the continuation of the USDA-IPM initiative and funds to meet the data requirements of the new Food Quality Protection Act; (3) appropriate adequate funds to the Animal and Plant Health Inspection Service (APHIS) to continue the Golden Nematode quarantine program, without which the industry would be subjected to probable export trade restrictions by importing nations; and (4) not restrict funding for the Market Access Program.

AGRICULTURAL RESEARCH SERVICE (ARS) FUNDING

For fiscal year 1998, in order to maintain the current level of research, the National Potato Council seeks at least the 1997 level of funding for all programs along with flexibility by ARS for potato research priority projects which would include more research on late blight. The Council specifically urges that the Appropriations Committee report also include language directing ARS to continue to work with the National Potato Council in determining priorities. We also hope that you will encourage the ARS, as potato base research funds come up for review, to direct more of such base funds into agreed upon higher priority research projects.

As you recall, the National Potato Research Proposal was the result of an intensive effort begun in 1984 between the Council and the ARS to identify national priority research issues of concern to the potato industry. Based on these identifiable research needs, the National Potato Research Proposal received initial funding from the Congress for ring rot diseases; early dying disease; marketing; aphids; potato beetle and varietal development.

The monies provided to the ARS have been greatly appreciated and the potato growers definitely see results from this research program. As a result of ARS research, potato varieties have been developed that are resistant to aphids which carry the potato leafroll virus. This virus limits potato yields and marketability by causing spotting and discoloration inside potatoes. The development of these resistant varieties should translate into reduced use of crop protection chemicals to control aphids on potatoes. We are getting feedback on research results back to the producer by having researchers speak at seminars and by making available to the potato industry a written summary of all research underway.

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Potato growers recognize that, in order to remain a viable and competitive industry, we must constantly strive to improve production efficiency and market quality while reducing the use of pesticides. Through carefully planned and coordinated research, we believe we can continue to offer an excellent high-value product and maintain a viable and competitive industry in the United States.

The National Potato Council has agreed to work with USDA, EPA and FDA in what we call a National Stewardship Program. Our growers will work toward pest management practices that further reduce risk to humans and the environment. Flexibility in ARS potato research funds will greatly facilitate this effort.

It is important to note that representatives of the Council have held annual meetings with ARS officials, the most recent in December of 1996, to discuss the distribution and use of research funds. In response to this Committee's direction, the Council has worked closely with the ARS to ensure that the research conducted is meaningful and addresses industry problems in the most thorough, expeditious, and cost effective manner. The Council looks forward to continuing its close partnership with ARS to maximize the use of these important funds as this subcommittee has directed.

CSREES SPECIAL GRANT REQUEST

The Council has also been working with CSREES on priorities for potato research and extension.

We request \$2 million (an increase of \$800,000 over last year) for a special grant under the CSREES and urge that the Committee report repeat language included last year; "Potato research—The conferees expect the Department to ensure that funds provided to CSREES for potato research are utilized for varietal development/testing. Further, these funds are to be awarded competitively after review by the Potato Industry Working Group."

CSREES received 28 excellent proposals for variety development and testing in 1997, but due to funding limitations only 8 were funded. For example, two projects were submitted by New York, but only one was partially funded. Other states, including Wisconsin, Maryland, North Carolina and Colorado submitted proposals with only one, Colorado, receiving partial funding.

The Council will continue to work closely with USDA and will report annually to the Congress on the progress of current research and, once USDA's reviews are completed, the need for new research efforts.

GOLDEN NEMATODE QUARANTINE AND SURVEY

The Animal and Plant Health Inspection Service assures that potatoes are protected from the importation of harmful pests and diseases and works with potato growers in assuring that potatoes meet phytosanitary export requirements.

The Golden Nematode is a significant pest which has been quarantined by USDA-APHIS for over 50 years, and this pest has been confined to a few locations in New York state. Its commercial hosts are potatoes, tomatoes, and eggplants. It is important to our domestic industry and to our export market that this quarantine be continued and be effective. We are informed that federal budget reductions over the past several years have raised concerns over the future of this program. Funding for this program has dropped from almost \$900,000 in fiscal 1992 to \$444,000 in fiscal year 1997. We strongly urge that the 1997 level of \$444,000 be provided and used for regulation enforcement and survey work so that this program can continue in order to avoid jeopardizing domestic production and eliminating export markets.

MARKET ACCESS PROGRAM

The Foreign Agricultural Service (FAS) assists U.S. potato growers in the export market and administers funds provided to the National Potato Promotion Board under the Market Access Program (MAP). MAP and its predecessor program have been particularly successful since 1986 in helping potatoes gain greater access and product recognition in foreign markets and is legal under the new GATT agreement.

Industry research shows that there is a direct correlation between receiving MAP funds and the ability to effectively market overseas. With MAP assistance, the U.S. Potato Board has developed long-term markets for U.S. potato exports and created an outlet for surplus potatoes grown domestically, helping stabilize farm gate prices throughout the U.S. industry. As a direct result of promotional campaigns made possible by the pooling of industry monies and government MAP funds, U.S. potato exports have reached record volumes and values. Since 1986, total U.S. potato exports have increased three-fold in volume terms and almost six-fold in value, reaching an export value of over \$583 million in 1996. In fiscal year 1996, U.S. frozen potato exports alone were valued at over \$285 million, a 14 percent increase over

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1995. Exports for 1986 were valued at \$64 million. Exports account for 8 percent of U.S. production. With MAP, U.S. potato exports have expanded to new markets in Asia and South America and the industry has diversified its marketing activities to include trade advertising, trade seminars, restaurant and food service promotions, industry orientation tours, merchandising, and research and evaluation.

During the recent Farm Bill debate, the U.S. potato industry in cooperation with a coalition of agricultural commodity groups fought to preserve the current MAP program. It was our industry's position then and remains our position today that substantive changes made to the MAP program by the 1993 Omnibus Budget Reconciliation Act and the 1996 Agricultural Appropriations Bill, which our industry supported, fully addressed the concerns raised by some in the Congress and others about program efficiencies and management. Those changes imposed minimum contribution amounts for nonprofit participants, required that all participants certify that funds supplement but do not supplant industry funds, imposed a five-year limit on the use of brand MAP funds in a given country, and gave priority funding to small U.S. entities and cooperatives under the branded program. Additional changes to the program made by the 1996 Farm Bill, which preclude direct MAP funding to large corporations and to foreign entities for foreign-produced products, ensure that the real beneficiaries of the MAP program will be U.S. farmers, cooperatives, and U.S. agricultural products.

One remaining concern about the MAP program relates to annual funding levels, which have been reduced by Congress over the last several years and again last year by the 1996 Farm Bill. U.S. potato growers were discouraged that the 1996 Farm Bill reduced program funding from its previous authorized level of \$110 million to \$90 million annually, and strongly believe that funding should eventually be restored to its previously high level of \$200 million to take full advantage of the WTO-legal program.

Despite funding cuts, we nevertheless are encouraged that Congress recognized the importance of continuing this fully accountable and result-oriented program for U.S. farmers. At a time when U.S. agriculture is struggling to compete with subsidized foreign competition and foreign governments are increasing GATT/WTO-legal promotional assistance to their agricultural sectors, we encourage Congress to keep in tact and extend greater funding to the one USDA program that has truly helped U.S. agricultural products compete in the global marketplace.

This concludes our statement and we would be pleased to respond to questions or provide further information for the record.

PREPARED STATEMENT OF JOHN F. O'NEAL, GENERAL COUNSEL, NATIONAL RURAL
TELECOM ASSOCIATION

SUMMARY OF TESTIMONY REQUESTS

Project involved: Telecommunications lending programs administered by the Rural Utilities Service of the U.S. Department of Agriculture.

Actions proposed: Supporting loan levels for fiscal year 1998 in the same amounts as those contained in the Fiscal Year 1997 Agriculture Appropriations Act (Public Law 104-180) for hardship, cost-of-money, Rural Telephone Bank and guaranteed loan programs and the associated subsidy to support hardship and Rural Telephone Bank loans at existing levels. Also supporting funding for \$150 million in loan and \$21 million grant authority designated for distance learning and telemedicine purposes as requested in the President's budget. Supporting an extension of the language removing the 7 percent interest rate ceiling on cost-of-money loans for fiscal year 1998. Supporting continuation of the restriction on retirement of Rural Telephone Bank class A stock in fiscal year 1998 at the level contained in Public Law 104-180 and an extension of the prohibition against the transfer of Rural Telephone Bank funds to the general fund.

Mr. Chairman, Members of the Committee: My name is John F. O'Neal. I am General Counsel of the National Rural Telecom Association. NRTA is comprised primarily of commercial telephone companies which borrow their capital needs from the Rural Utilities Service of the U.S. Department of Agriculture (RUS) to furnish and improve telephone service in rural areas. Approximately 1,000, or 71 percent of the nation's local telephone systems borrow from RUS. About three-fourths of these are commercial telephone companies. RUS borrowers serve almost 6 million subscribers in 46 states and employ over 30,000 people. In accepting loan funds, borrowers assume an obligation under the act to serve the widest practical number of rural users within their service area.

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PROGRAM BACKGROUND

Rural telephone systems have an ongoing need for long-term, fixed rate capital at affordable interest rates. Since 1949, that capital has been provided through telecommunications lending programs administered by the Rural Utilities Service and its predecessor, the Rural Electrification Agency (REA). Telephone loans are made for telephone facilities related to the furnishing, improvement or extension of rural telecommunications at the local exchange level.

RUS loans are made exclusively for capital improvements and loan funds are segregated from borrower operating revenues. Loans are not made to fund operating revenues or profits of the borrower system. There is a proscription in the Act against loans which would duplicate facilities and state authority to regulate telephone service is expressly preserved under the Rural Electrification Act.

Rural telephone systems operate at a severe geographical handicap when compared with other telephone companies. While almost 6 million rural telephone subscribers receive telephone service from RUS borrower systems, they account for only four percent of total U.S. subscribers. Clothe other hand, borrower service territories total 37 percent of the land area—nearly 1½ million square miles. RUS borrowers average about six subscribers per mile of telephone line and have an average of more than 1,000 route miles of lines in their systems.

Because of low-density and the inherent high cost of serving these areas, Congress made long-term, fixed rate loans available at reasonable rates of interest to assure that rural telephone subscribers, the ultimate beneficiaries of these programs, have comparable telephone service with their urban counterparts at affordable subscriber rates. This principle is especially valid today as the United States endeavors to deploy telecommunications “information superhighway” technology and as customers and regulators constantly demand improved and enhanced services.

At the same time, the underlying statutory authority which governs the current program has undergone significant change. In 1993, telecommunications lending was refocused toward facilities modernization. Most of the subsidy cost has been eliminated from the program. The subsidy that remains has been targeted to the highest cost, lowest density systems. Other loans are made at Treasury’s cost-of-money or greater. We are proud to support this committees’ and the Congress’ deficit reduction efforts without jeopardizing the important mission of modernizing rural telecommunications.

We are proud to state once again for the record that there has never been a default in the RUS/REA telephone program! All loans have been repaid in accordance with their terms with interest. As of December 31, 1996, over \$4 billion of principal and \$5 billion in interest had been paid by borrowers.

NEED FOR RUS TELECOMMUNICATIONS LENDING CONTINUES

The need for rural telecommunications lending is great today, possibly even greater than in the past. Technological advances make it imperative that rural telephone companies upgrade their systems to keep pace with improvements and provide the latest available technology to their subscribers.

As the rural telecommunications infrastructure continues to evolve, the benefits for rural life and the rural economy will be impressive. As existing distance learning programs prove, interactive optical fiber can provide education opportunities in even the smallest towns comparable to hiring many extra teachers. Using communications for medical diagnosis, monitoring and even treatment can help combat the shortage of doctors and the rash of rural hospital closings. Improved emergency services can save lives. For example, telephone systems are working to improve the ability of the 911 emergency system to recognize the location from which emergency calls originate to allow faster response.

Businesses like telemarketing and insurance can thrive in rural areas, and telecommuting can become a realistic employment option. RUS is already providing financing for digital switches, more optical fiber between central offices and for school and medical communications facilities, helping rural communities to reap the benefits of technology.

In addition, rural Americans continue the struggle to revitalize their rural economies. In light of the fact that both Congress and the President have recognized that telecommunications enhancement is a significant part of such development, the need for affordable capital to finance technological upgrading is greater than ever.

These rapid technological changes and federal policies of competition and deregulation in the telephone industry, as evidenced by last year’s passage of the “Telecommunications Act of 1996”, underscore the continuing need for targeted assistance to rural areas. The inherently higher costs to serve these areas have not abated. Regulatory trends towards encouraging competition among telephone sys-

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tems increase pressures to shift more costs onto rural ratepayers. Interstate subscriber line charges of \$3.50 have already shifted costs to customers. Pressures to recover more and more of the higher costs of rural service from rural customers to foster urban competitive responses will further burden rural consumers. And, as rural rates rise, small telephone systems will tend to lose confidence that they can recover the investments for costly network upgrades.

1996 TELECOMMUNICATIONS ACT EFFECT ON RURAL AMERICA

Congress passed the Telecommunications Act of 1996 as the culmination of more than a decade of debating national telecommunications policy and balancing many diverse needs and interests. The 1996 Act responded to a number of rural needs and differences with a series of safeguards to ensure that rates, services and network development in rural America will be reasonably comparable to urban telecommunications opportunities.

The process of implementing the new law raises troubling uncertainties and concerns about whether the FCC and the states will honor the balance Congress achieved in its policy, as regulators (a) radically revise the mechanisms for preserving and advancing "universal service," (b) adjust the cost recovery responsibilities and allocations of authority between federal and state regulation, (c) effectuate the Act's somewhat different urban and rural ground rules for how new companies and incumbent universal service providers connect their networks and compensate each other and (d) peel back layers of regulation developed over a century. So far, the FCC has been overzealous in expanding the Act's market-opening provisions to give new entrants a regulatory head start and advantage at the expense of the Act's rural development and universal service provisions. The FCC is trying to usurp the role of competition by dictating a whole new—and wholly inadequate—way to measure the costs of modern, nationwide telecommunications access to information. Measuring rural telephone companies' costs for the networks they are already providing by theorizing about an imaginary, idealized new network, as the FCC proposes, threatens to undermine the Act's commitment to rural progress. The FCC is also neglecting the Act's requirement for "sufficient" high cost support for nationwide evolving universal service and network progress.

Both strong RUS and RTB programs to finance up-to-date rural facilities and closer FCC adherence to the Act's rural development objectives are crucial to rural America. Congress and the courts must carefully supervise the FCC's implementation to achieve the rural access to information and an evolving modern public network intended by Congress, as well as the benefits of deregulation and genuine competition.

EXPANDED CONGRESSIONAL MANDATES FOR RURAL TELECOMMUNICATIONS

Considerable loan demand also will be generated in the future because of two additional mandates for enhanced rural telecommunications standards contained in the authorizing legislation enacted in 1993 by Congress in Public Law 103-129.

First, Congress expanded the definition of a "rural area" to include towns up to 5,000 population from the previous standard of 1,500 which had the effect of qualifying substantial additional geographic areas of the country for loans. Second, as a prerequisite to eligibility for insured and Rural Telephone Bank loans, RUS, is in the process of approving a telecommunications modernization plan for each state which meet certain minimum statutory objectives for the deployment of modern telecommunications technology. Implementation of these plans will generate additional loan demand as rural telephone systems strive to meet these increased service objectives in the rural areas they serve.

These two Congressional mandates coupled with the need for stable financing sources to meet the infrastructure demands envisioned for rural areas by the new telecommunications act amply demonstrate the continuing need for this important program at the levels established in last year's appropriations act. They are:

5 percent hardship loans	\$75,000,000
Cost-of-money loans	300,000,000
Guaranteed loans	120,000,000
Rural telephone bank loans	175,000,000
Total	670,000,000

The President's budget request for this program closely parallels last year's approved loan levels with one important exception: Despite substantial ongoing demand, the President proposes to reduce hardship loans \$35 million next year. The savings are only about \$1.5 million dollars. Based on figures supplied by RUS, early

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in this fiscal year there was a backlog of \$65 million in this program. At the end of the first quarter, the agency had already approved \$51 million hardship loans or almost 75 percent of the authorization for this entire fiscal year and had an additional \$84 million in applications on hand. We believe that the needs of this program balanced with the minimal cost to the taxpayer argue for its continuation at current levels given the fact that it provides funding for the neediest borrower systems serving the highest cost areas.

SPECIFIC ADDITIONAL REQUESTS

Removal of the 7 percent cap on cost-of-money loans

Again this year we are supporting removal of the 7 percent ceiling on cost-of-money loans. This Committee included language in the fiscal year 1996 act to permit cost-of-money loans approved to exceed the 7 percent per year interest rate ceiling contained in the authorizing act. The language was continued in the fiscal year 1997 act. We support an extension of this provision in the fiscal year 1998 bill. Long-term Treasury interest rates currently exceed 7 percent and may exceed 7 percent in fiscal year 1998. In that event, the cost-of-money loan program could be disrupted and loan levels not achieved since adequate subsidy would not be available to support the program at the authorized levels. For this reason, we believe it is important to incorporate this language in the bill again this year.

Restriction on retirement of class A government stock in the Rural Telephone Bank (RTB) and continuation of the prohibition against transfer of RTB funds to the general fund

The Committee should continue the restriction on retirement of the amount of class A stock by the Rural Telephone Bank in fiscal year 1998. The Bank is currently retiring the government's stock as required under current law. We believe that this process which began last year should continue to be an orderly one as contemplated by the retirement schedule enacted two years ago and continued in last year's bill to retire no more than 5 percent of the total class A stock in one year. The Committee should also continue the prohibition against the transfer of bank funds to the general fund of the Treasury along with the requirement that the bank receive interest on those funds. The private Class B and C stockholders of the Rural Telephone Bank have a vested ownership interest in the assets of the bank including its funds and their rights should not be abrogated.

Loans and grants for telemedicine and distance learning

Last year's Farm Bill (Public Law 104-127) authorized a new loan and grant program administered by RUS specifically devoted to telemedicine and distance learning. The purpose is to accelerate development of telemedicine and distance learning services in rural areas through the use of telecommunications, computer networks, and related advanced technologies by students, teachers, medical professionals, and rural residents. The President's budget requests \$150 million in loan authority for fiscal year 1998 and \$21 million in grants for these purposes. Loans are made at the government's cost-of-money.

We believe this program specifically designated for distance learning and telemedicine purposes is particularly important. Targeting funds in this manner should spur deployment of this new technology which is vital for the survival of rural schools, hospitals and the rural communities they serve. At the same time, we believe the level proposed strikes a cost effective balance for the taxpayer.

CONCLUSION

Thank you for the opportunity to present the association's views concerning this vital program. The telecommunications lending programs of RUS continue to work effectively and accomplish the objectives established by Congress at a minimal cost to the taxpayer.

PREPARED STATEMENT OF THE NATIONAL TELEPHONE COOPERATIVE ASSOCIATION

SUMMARY

Considering the current telecommunications demands being made by the Administration, Congress, and rural Americans, it is clear that the need for the Rural Utilities Service (RUS) telecommunications lending has never been greater. In this context, the National Telephone Cooperative Association (NTCA) strongly supports the continuation of the RUS telecommunications loan program. For nearly 48 years, the RUS and its predecessor, the REA, has carried out its mission, of both providing

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and improving rural telephone service, with distinction. Appropriately funded, it will continue to do so well into the future. In short, RUS financing is critical to ensuring that rural Americans enjoy the benefits of the information revolution currently sweeping the nation.

INTRODUCTION

It is a pleasure to have the opportunity to discuss the current financing needs of the rural local exchange carrier (LEC) industry. In light of all that is occurring the telecommunications front, this discussion is urgently needed. NTCA, who represents our concerns here in Washington, is a national trade association representing nearly 500 small, rural cooperative and commercial telephone systems. These locally owned and operated LEC's are situated throughout our nation. More than 80 percent of NTCA's member systems and their subscribers have benefited by the RUS/REA telecommunications loan program.

NTCA's members, like most of the country's independent LEC's, evolved to serve the high cost rural areas of the nation. There can be no doubt regarding the high cost of providing telecommunications services to rural America. Just considering that these telcos provide service to approximately 40 percent of the nation's geographic area is convincing enough. In addition, when we consider that rural subscribers account for only 4.3 percent of the nation's total population, it quickly becomes clear why rural America is so costly to serve.

Congress recognized this unique financing dilemma confronting America's rural telecommunications providers as early as 1949. It was in that year that it amended the Rural Electrification Act (RE Act) was amended to create the REA telephone loan program. Congress planned for the future and fully understood that rural America's telecommunications financing needs would be ongoing. It charged the REA with the responsibility for making low interest loans to both a " * * * furnish and improve * * *" rural telephone service.

In keeping with its mission, Congress has periodically amended the RE Act to ensure that the original mission of the program is met. In 1971, the Rural Telephone Bank (RTB) was created as a supplemental source of direct loan financing. In 1973, the REA was provided with the ability to guarantee Federal Financing Bank (FFB) and private lender notes. In 1993, the Congress established a fourth program lending facet, the REA treasury-cost fund. Most recently, the reorganization of the U.S. Department of Agriculture facilitated consolidation of the Department's utility development programs through transferring the telecommunications loan and technical assistance programs of the REA to the Rural Utilities Service (RUS).

The infrastructure being deployed by a majority of rural LEC's today is capable of providing state-of-the-art services such as two-way interactive video links. These services are changing the destiny of rural America. Through this technology, rural Americans are assured of improved education, health care access, and business and government services. The RUS's telecommunications loan program is financing a significant portion of such infrastructure enhancement.

RESPONSIBILITIES CONFRONTING INDUSTRY ARE SUBSTANTIAL

The success of private/public partnership represented by NTCA's members' use of the RUS telecommunications loan program is substantial. This partnership boasts infrastructure of a highly sophisticated quality. With the assistance of RUS capital and technical standards, NTCA's members are leaders in modernizing their telecommunications systems. This financing partnership fosters a true commitment to rural residents. Compared to their urban counterparts, rural communities are faced with higher poverty rates, lower income levels, and higher costs of delivering modern infrastructure.

These rapid changes are underscored by recent actions taken with passage of the "Telecommunications Act of 1996." As we enact federal policies of competition and deregulation, the high costs associated with providing modern telecommunications services in rural areas will not diminish. Moreover, the mandated provisions for an evolving definition of universal service serves to emphasize the need for targeted assistance to rural areas. One year into implementation of the act, the FCC's interpretation of the law has held little regard for congressional intent particularly with respect to rural provisions that are vital to rural incumbent LEC's. These important provisions include universal service language mandating a national commitment to geographic toll rate averaging and consumer access to quality services at reasonable and affordable rates; interconnection exemption, suspension and modification language to spare rural LEC's from excessive new regulatory burdens; infrastructure sharing language requiring large carriers to engage in such sharing upon request

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of a facilities based universal service designee that lacks resources; as well as other provisions important to the rural industry.

It is clear that without appropriate strong national safeguards the transition to a competitive and deregulatory telecommunications environment would damage the ability of rural Americans to fully participate in the information age. Today, RUS borrowers average only 6 miles per subscriber compared to 37 per mile for the larger, urban-oriented, non-RUS financed systems. This results in an average plant investment per subscriber that is 38 percent higher for RUS borrowers. Without the availability of affordable capital financing to compete and provide adequate, up-to-date services in an unfavorable environment, building adequate telecommunications infrastructure in rural communities will be untenable.

RUS: CONNECTING RURAL AMERICA TO THE FUTURE

Clearly, the RUS telecommunications loan program is helping extend benefits of the information superhighway to rural America. RUS telephone lending creates public-private partnerships that work to create telecommunications infrastructure. These federal resources have stimulated billions of dollars of private capital.

For example, in fiscal year 1996, a subsidy of just \$3.9 million generated \$670 million in federal loans and loan guarantees. For every dollar in government money invested, 4.5 private dollars were invested. RUS borrowers will use these funds to provide modem services to 74,811 rural families, install more than 8,000 miles of fiber optic facilities, and purchase 187 new digital switches.

The RUS is also making a difference in our rural schools, libraries, and hospitals. Since 1993, the RUS Distance Learning and Telemedicine (DLT) Grant and Loan program has provided 142 grants totaling over \$41.5 million for funding for interactive technology in rural schools, hospitals, and health clinics. This program has provided unprecedented educational opportunities for rural students and enhanced health care for rural residents.

As a result of this program, thousands of rural students will gain access to additional classes and advanced curriculum. The RUS reports that previously unavailable courses such as calculus, physics, chemistry, and accounting will be made available to 550 rural schools in 33 states. In addition, telemedicine facilities which provide cost-effective services such as 24 hour access to trauma specialists, continuing medical education, and distance consultations for pediatrics, obstetrics, cardiology, and oncology will be made available to 438 hospitals and clinics in 23 states. Simply stated, this critical program is allowing our rural citizens to overcome the isolated nature of their rural areas through the power of modern telecommunications.

To date, the RUS has made nearly \$11.4 billion in loans for the improvement and expansion of telecommunications development in our rural areas. At the end of 1996, about \$6.2 billion in principal and interest had been paid by borrowers. We are proud to claim that there has never been a loss for U.S. taxpayers through borrower default or abuse in 47 years of RUS telecommunications lending!

RECOMMENDATIONS FOR THE SUBCOMMITTEE'S CONSIDERATION

RUS telecommunications loan program

Increasing demand for expanded telecommunications services and infrastructure upgrades indicates the level of need. The amount of loan applications pending before RUS stands at more than \$300 million as of January 31, 1997. To allow for this demand to be met, NTCA recommends that the Committee consider the following RUS Telecommunications loan levels for fiscal year 1998:

5 percent hardship loans	\$75,000,000
Treasury-cost loans	300,000,000
F.B. Loan guarantees	120,000,000
Rural telephone bank loans	175,000,000
<hr/>	
Total	670,000,000

These loan levels are the same as the current fiscal year's funding provided by this committee and represent genuine commitment to rural telecommunications needs.

Removal of interest rate cap on Treasury-cost loans

We are also requesting that the Committee include language removing the 7 percent interest rate cap on Treasury-cost loans. This provision was included in this year's Fiscal Year 1997 Agriculture Appropriations Act, and it prevents the potential disruption of the program in the case where interest rates exceed 7 percent and

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insufficient subsidy cannot support authorized lending levels. It is a continuation of current policy and supports the viability of this critical loan program.

Rural Telephone Bank (RTB) privatization issues

As the RTB continues the process of statutorily privatizing during the course of the current fiscal year, the committee should be reminded of the importance of the language included in last year's legislation ensuring that the cash assets of the RTB are not "swept" by Treasury.

In this Subcommittee's 1995 report, the Administration was directed to conduct a study on privatization and to report these findings to both authorizing and appropriating committees. Last June, the Administration released its findings from the study which concluded that privatization of the bank is viable as early as the end of 1998 so long as the interest formula is changed to reflect the actual cost of lending for the bank. Congress, RTB Stockholders, and the rural telecommunications industry deserve the benefit of having RTB privatization reviewed thoroughly.

RUS Distance learning and telemedicine (DLT) program

The RUS Distance Learning and Telemedicine Grant program has proven to be an indispensable tool for rural development. In this regard, NTCA urges the Committee to provide adequate funding for this critical program. NTCA supports the exciting initiative included with the recent enactment of the Farm Bill (Public Law 104-127). This legislation authorizes a \$150 million Distance Learning and Telemedicine cost-of-money loan and grant program that began in fiscal year 1996. As of January 1997, there is a \$30 million backlog in requests for funding from the program. In looking at fiscal year 1998, NTCA would encourage the Committee to consider funding this critical program for the purpose of extending benefits of modern telecommunications to rural America. However, to ensure that these networks are built, the RUS telecommunication loan programs must be fully funded to provide the necessary backbone for the DLT infrastructure.

CONCLUSION

The RUS telephone loan program bears a proud record and should remain in place to continue assisting the rural LEC industry to meet its service commitment to rural Americans. As changes to the nation's telecommunications policy are on the horizon, the continuation of the RUS telephone loan program is a critical necessity to ensure the highest standard of modern service in rural America. The rural segment of the nation's telecommunications infrastructure is critical to the national objective of universal telecommunications service. The RUS and the rural LEC industry are natural partners in linking all Americans to the "information super-highway."

As the nation faces substantial economic and technological challenges in the near future, rural areas must be equipped with the appropriate tools need to manage those challenges. The RUS telecommunications loan program has carried out its mission for more than 48 years with distinction and unrivaled financial reliability. Congress willing, the RUS can do the job necessary to connect rural America to the future!

Thank you for your time and consideration!

PREPARED STATEMENT OF WALTER GAINER, PRESIDENT, NATIONAL UTILITY CONTRACTORS ASSOCIATION

Mr. Chairman and members of the subcommittee, my name is Walter Gainer. I am president of W.F. Wilson & Sons, Inc., in Ellicott City, Maryland. I am pleased to appear before you today on behalf of the National Utility Contractors Association (NUCA). NUCA is comprised of about 2,000 companies that build and supply the materials for vital water, sewer, gas, and communications systems.

I have been in the business of building and repairing water and sewer systems for the past 28 years. My personal and professional experience has shown me that there is a critical need for federal water and sewer construction funding in rural America. Strong federal leadership and continued federal investment in the Rural Utilities Service Water and Waste Disposal Program is critical due to the institutional weaknesses of rural water and sewer entities. Among other disadvantages, these communities may have a limited tax base, a limited knowledge of financial markets and tools, or simply no authority to issue public debt to pay for improvements.

I grew up in a small town in Nicholas County, West Virginia. It was so far back in the mountains that they had to pipe sunshine into the area. Fortunately, the

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local mill had a water system that was made available to the town. In the 1960's the mill changed hands, and the city built a new system with the help of federal rural water funds. Since then, many miles of water lines have been installed in Nicholas County. Like the benefits bestowed by the Rural Electric Administration back in the 1940's, these water lines have quite literally brought parts of the county into the modern world. I cannot tell you how important these lines have been in helping the growth of Nicholas County and other rural economies.

There is still a lot of work to be done. In Nicholas County, there is an area called Hinkle Mountain near Richwood that has been hoping to get a water system for the past 15 years. The people on Hinkle Mountain have been hauling water with tanks for years just like people in Third World countries. The residents have been told that they are not high on the project priority list. There are scores of other areas in worse shape. It's hard to believe that some in Congress fail to recognize the importance of construction assistance for basic services in rural areas.

At a time when everyone's talking about the Internet and other technological advances throughout industry, including utility construction, the concept of basic plumbing isn't very exciting. But if we don't address this issue, a lot of people are going to be left behind—way behind. I know they don't put brass plaques underground, but the Rural Utilities Service programs work for rural residents and should be funded until everyone in America has access to good drinking water and waste disposal facilities.

FISCAL 1998 RECOMMENDATION

We support the Administration's \$1.2 billion request for RUS Water and Waste Disposal Grants and Loans. This represents a much-needed increase in funds that will benefit hundreds of thousands of rural households and millions of people. Projects are ready to go. A backlog of pending loan and grant applications totaled more than \$4 billion at the end of 1996.

RURAL INFRASTRUCTURE NEEDS

The documented need for capital investment continues to climb as the federal government, in partnership with state and local governments, wrestles with budgetary constraints. Rural communities are hardest hit because they often lack any type of water or waste disposal system and have few technical or financial resources. The documented needs are irrefutable.

Wastewater

The U.S. EPA's 1992 needs assessment of publicly owned treatment facilities showed more than \$137 billion in wastewater collection and treatment needs over the next 20 years, including \$13.4 billion for communities with fewer than 10,000 residents. New collector sewers (\$5.2 billion), interceptor sewers (\$2.5 billion), and secondary treatment facilities (\$3.9 billion) account for most of rural America's documented wastewater infrastructure needs. EPA officials are currently working on a revised needs assessment that is expected to show even higher numbers. The new report is expected this September.

Drinking water

Drinking water needs assessments have been conducted by the U.S. EPA and the USDA. Safe Drinking Water Act treatment requirements are a significant factor driving infrastructure costs and needs, but the largest share of capital needs is for the repair and replacement of existing water supply and distribution infrastructure.

In January, the U.S. EPA released its first drinking water infrastructure survey, which found that more than \$138 billion is needed over the next 20 years for water infrastructure—transmission and distribution lines, water treatment plants, and water storage and supply facilities. The survey looked only at community water systems that have at least 15 service connections or regularly serve at least 25 residents. Small systems serving 3,300 or fewer people reported more than \$37 billion in construction needs, including \$23.8 billion to fix or build transmission and distribution pipes. Of particular concern for rural households is the fact that they represent the largest per-household need and are burdened with the highest per-household cost. The EPA believes that as many as 16 million households are not served by community water systems, and an unknown number of these homes lack a safe drinking water supply.

Last year the USDA presented the Water 2000 study, which found that as many as 8 million people have drinking water quality problems and approximately 1.1 million people lack indoor plumbing. The study concluded that at least \$10 billion is needed to address these problems.

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BENEFITS OF CAPITAL INVESTMENT

Investment in rural water and sewer facilities generates important benefits in terms of public health and safety, economic growth, and environmental protection. For many rural communities, contaminated water, the inability to attract new businesses, and the lack of adequate fire protection are daily problems.

Public health and safety

Safe drinking water cannot be taken for granted. The dangers posed by microbiological organisms and chemical contaminants in water are certainly well-known to this committee. The Water 2000 assessment cited earlier demonstrated that water supplies in rural areas are susceptible to contamination from farm runoff, including animal waste, herbicides, and pesticides. Regulations alone don't solve the problem. Capital infrastructure, including new and upgraded treatment plants and good distribution systems, go hand in glove with public health.

Public safety is an issue in old, dilapidated pipelines. For example, severely clogged or tuberculated water mains make fire protection difficult. This tends to be a problem in older, urban areas but can occur in rural areas with old systems. Similarly, aged sewer mains can collapse and create dangerous sinkholes if they are not rehabilitated or replaced.

Economic development

Water delivery and treatment systems must be in place before homes, schools, hospitals, and businesses can be established. No systems, no jobs. Conversely, investment in rural water and sewer systems stimulates the demand for goods and services. The investment enhances private-sector profitability, increases labor productivity, and stimulates private investment in plant and equipment.

A 1990 study published by NUCA showed that under a relatively conservative set of assumptions, a one-time investment in water and waste facilities of \$2.5 billion is self-financing in less than a decade as a result of the expanded tax base. Copies of the study are available upon request.

A 1992 study released by NUCA concluded that a many as 57,000 jobs are created for every \$1 billion invested in clean water projects. More than one-half of these jobs are permanent jobs that pay good wages.

Environmental protection

Untreated sewage and stormwater runoff can devastate water bodies. This occurs when collection and treatment systems are nonexistent and when pipes leak. For example, a leaking water main will often seep into sewer lines located below, with two results: (1) additional water flows to the treatment plant, which is unnecessary and costly, and (2) the treated water mixes with sewage and filtrates into the water table. The tuberculated pipes previously mentioned also require substantial additional power (electricity) to stay pressurized.

CONCLUSION

The overwhelming need for water and waste disposal investment in rural communities outweighs current funding resources at all levels of government. For this reason, NUCA has proposed the creation of a revenue-generating mechanism tied directly to water and sewer infrastructure. For example, broad-based user fees based on gallons of water consumed and/or wastewater discharged (e.g., a nickel per 1,000 gallons) could be funneled into federal or state trust funds.

In the meantime, we urge the subcommittee to strongly consider the administration's \$1.2 billion request for RUS Water and Waste Disposal programs in fiscal 1998. An appropriation of this magnitude will help address the enormous backlog of qualified applicants.

Mr. Chairman, we recognize that our country's future is at stake if we don't do something about runaway and wasteful spending. But we urge you to remember that clean water is one of the most important and most basic public needs out there.

Thanks once again for the opportunity to provide recommendations.

PREPARED STATEMENT OF RICHARD G. JONES, CHAIRMAN, NATIONAL WATERSHED
COALITION

Mr. Chairman and members of the subcommittee: The National Watershed Coalition (NWC) is pleased to present this testimony in support of some of the most beneficial water resource conservation programs ever developed in the United States. The Coalition recognizes full well the very difficult financial situation our nation faces. That makes the work of this Subcommittee very important. It also makes it

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imperative that the federal programs that are continued are those that provide real benefit to society, and are not programs that would be nice to have if funds were unlimited. We believe that the Small Watershed Program (Public Law 83-566) and the Flood Prevention Operations Program (Public Law 78-534) are examples of those rare programs that address our nation's vital natural resources which are critical to our very survival, do so in a way that provide benefits in excess of costs, and are programs that serve as models for the way all federal programs should work.

The National Watershed Coalition is an alliance of national, regional, state and local organizations that have a common interest in advocating the use of the watershed when dealing with natural resource issues. We also support the use of total resource management principles in planning. We are advocates of both the Small Watershed Program and the Flood Prevention Operations Program administered by USDA's Natural Resources Conservation Service (NRCS), formerly the Soil Conservation Service (SCS). These resource protection programs deserve much higher priority than they have had in the past. Even in difficult financial times, their revitalization would pay dividends in monetary and other benefits, and jobs! The disastrous 1993 Midwest floods should have taught us something. If one examines the Report of the Interagency Floodplain Management Review Committee that studied that event, we see that flood damages were significantly reduced in areas where Public Law 566 projects were installed. The requests for disaster assistance were also less.

The watershed as the logical unit for dealing with natural resource problems has long been recognized. Public Law 566 offers a complete watershed management approach, and should have a prominent place in our current federal policy emphasizing watersheds and total resource management based planning. Why should the federal government be involved with these watershed programs?

- They are programs whose objectives are the sustaining of our nation's precious natural resources for generations to come.
- They are not federal, but federally assisted. They do not represent the continued growth of the federal government.
- They are locally initiated and driven. Decisions are made by people affected, and respect private property rights.
- They share costs between the federal government and local people. Local sponsors pay between 30-40 percent of the total cost of Public Law 566 projects.
- They produce net benefits to society. The most recent program evaluation (1987) demonstrated the actual ratio of benefits to costs was approximately 2.2:1. The actual adjusted economic benefits exceeded the planned benefits by 34 percent. How many other federal programs do so well?
- They consider and enhance environmental values. Projects are subject to the discipline of being planned following the National Environmental Policy Act (NEPA), and the federal "Principles and Guidelines" for land and water projects. That is public scrutiny.
- They are flexible programs that can adapt to changing needs and priorities. Objectives that can be addressed are flood damage reduction, watershed protection (erosion and sediment control), water quality improvement, rural water supply, water conservation, fish and wildlife habitat improvement, recreation, irrigation and water management, etc. That is flexibility.
- They are programs that encourage all citizens to participate.
- They can address the needs of low income and minority communities.
- And best of all—they are programs the people like!

The National Watershed Coalition commends the Congress for the support given these programs over the years, and hopes that the outcome of the fiscal year 1998 appropriations process will enable this vital work to continue and expand as we seek to preserve, protect and better manage our nation's water and land resources. Every State in the United States has benefited from the Small Watershed Program.

In order to continue this high priority work in partnership with states and local governments, the Coalition recommends a fiscal year 1998 funding level of \$350 million for Watersheds and Flood Prevention Operations, Public Laws 566 and 534. The allocation between these two programs is best left to the NRCS. Of this amount, we would suggest that \$10 million be used for structural rehabilitation and replacement, and \$10 million be used for wetland acquisition as authorized by the 1990 Farm Bill. We recognize that in these difficult financial times, the Congress may not find it possible to provide that amount, but we also believe that we are not doing our job of helping you recognize the true need if we continually recommend the federal share of these needed funds be less. We would hope that everyone understand that these funds are only a part of the total that are committed to this vital purpose. The local project sponsors in these "federally assisted" endeavors, have a tremendous investment also. Additionally, the Coalition supports \$10.5 million for

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watershed planning, \$13.0 million for River Basin Surveys and Investigations, and \$38.0 million for the Resource Conservation and Development Program (RC&D). The Coalition also supports \$6.6 million for the Forestry Incentives Program. We also suggest that the Emergency Watershed Program (EWP) be provided with \$20 million to allow the NRCS to provide rapid response in time of natural disaster.

In addition to offering our thoughts on needed conservation program budget levels, we would like to express our great concern with the way in which the Administration's budget proposes to change the watershed program funding in fiscal year 1998. The Administration proposes taking \$60 million from the Public Law 83-566 Small Watershed Program, and putting it in the NRCS Conservation Operations account. While the Administration's budget suggests this approach simply combines some of the NRCS's technical assistance expenses into one account, and the funds will be used for "water resource assistance," we believe this is a means to put these funds in an account where they will not be used for Public Law 83-566 Small Watershed Projects, but instead will be spread around with virtually no program accountability. In our view this represents the long time desire of some in the Administration to circumvent the will of the Congress and eliminate Small Watershed Projects. The Administration's budget also eliminates any funding for the eleven watersheds authorized by the Flood Control Act of 1944 (Public Law 78-534), which was about \$18 million in 1997, but suggests that "worthwhile Public Law 534 projects" can be continued under the Small Watershed Program, Public Law 83-566 (with no funding?). We see this as a way to again administratively eliminate a Congressionally mandated program which some in the Administration don't care for, but one which has provided millions of dollars of benefits to society. Watershed project sponsors, who were encouraged to assume such responsibility by the federal government, now feel abandoned by that same federal "partner." The Administration's budget also provides an additional \$18 million in the RC&D program account (was this the Public Law 534 funding?), for funding local, non-federal, watershed and rangeland "coordinators." We believe it's time for less "coordinating", and more actual work on the ground. It seems to us that the money taken from the Small Watershed Program (\$60 million put in the Conservation Operations account and \$18 million in the RC&D account) would be far better used, and provide many more real benefits, if left in the Small Watershed Program where Congress intended it.

A number of proposed amendments to this legislation were considered during the discussions of the 1996 Farm Bill. For whatever reason, those proposed amendments did not survive. The NWC would urge you, whenever the time is appropriate, to take another look at those proposals, particularly the idea of expanding the objectives that the legislation can serve to include more non-structural practices, allow the law to provide assistance in developing rural water supplies (without water there is no rural development), eliminate the current requirement that mandates twenty percent (20 percent) of the total project benefits be "directly related to agriculture" which has the unintended effect of penalizing projects in poor, small, rural communities, and continue to explore the idea of allowing the USDA Secretary to accept transfers from other Federal departments and agencies to carry out projects under Public Law 83-566, when it is to the advantage of all. We would also urge that as the issue of cost sharing rates is examined in the future, cost sharing rates be set for the natural resource purpose to be achieved, rather on the practices used to achieve those purposes.

The Coalition appreciates the opportunity to offer these comments regarding fiscal year 1998 funding for the water resource programs administered by the Natural Resources Conservation Service. With the "downsizing" the NRCS has experienced, we would be remiss if we did not again express some concern as to their ability to provide adequate technical support in these watershed program areas. ARCS technical staff has been significantly reduced and budget constraints have not allowed that expertise to be replaced. Traditional fields of engineering and economics are but two examples. We see many states where the capability to support their responsibilities in these program areas is seriously diminished. This is a disturbing trend that needs to be halted. This downsizing has a very serious effect on state and local conservation programs. Local Watershed and Conservation Districts and the NRCS combine to make a very effective delivery system for providing the technical assistance to local people—farmers, ranchers and rural communities—in applying needed conservation practices. Many states and local units of government also have programs that provide financial assistance to land owners and operators for installing measures that reduce erosion, improve water quality, and maintain environmental quality. The NRCS provides, through agreement with the USDA Secretary of Agriculture, "on the land" technical assistance for applying these measures. The delivery system currently is in place, and by downsizing NRCS we are eroding the most effective and efficient coordinated means of working with local people to solve environ-

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mental problems ever developed. Our system and its ability to produce food and fiber is the envy of the entire world. In our view, these programs are the most important in terms of national priorities.

The Coalition pledges its full support to you as you continue your most important work. Our Executive Director/Watershed Programs Specialist Mr. John W. Peterson, who has over forty years experience in this business, is located in the Washington, DC area, and would be pleased to serve as a resource as needed.

Thank you for allowing the National Watershed Coalition (NWC) this opportunity.

PREPARED STATEMENT OF THE NONPRESCRIPTION DRUG MANUFACTURERS ASSOCIATION

The Nonprescription Drug Manufacturers Association (NDMA) is a 116-year old national trade association representing manufacturers and distributors of nonprescription or over-the-counter (OTC) medicines. Members of the Association account for over 90 percent of the retail sales of OTC medicines in the United States.

We appreciate the opportunity to comment on legislation that would fund the Food and Drug Administration (FDA), and on user fees that would be levied across-the-board on companies subject to FDA regulation. NDMA is opposed to such sweeping user fees.

NDMA supports full funding of the FDA by Congress to enable the agency to fulfill its important mission to assure protection of the public health and safety. We commend the job FDA has done, and are heartened by the dedication of the many FDA employees devoted to OTC drug regulatory activities.

NDMA supports reasonable user fees that are additive to adequate baseline OTC drug appropriations, if they are dedicated solely to the purpose of supporting and expediting approvals of new drug applications (NDA's) for original OTC's or for the switch of prescription drugs to nonprescription status, and if the user fees are subject to mandatory performance standards. NDMA categorically opposes the imposition of user fees as a substitute for full funding of FDA through the normal appropriations process to enable FDA to carry out its public health mission to regulate the general safety and effectiveness of OTC drugs, including fees levied to conduct inspections or other compliance activities that are part of FDA's core mission. NDMA also opposes as improper the levying of unrestricted user fees aimed at reducing or retiring the federal deficit.

With NDMA's support, the 1992 Prescription Drug User Fee Act (PDUFA) imposed user fees on NDA's and supplemental NDA's for the approval of OTC drugs, including OTC drugs switched from prescription to nonprescription status. FDA performance goals included in the legislative package under PDUFA 1992 apply to these applications. NDMA believes that PDUFA has worked to help accelerate the review and approval process, so that new OTC products can be made available to consumers. We therefore support the reauthorization of PDUFA for an additional five-year period, beginning with the 1998 fiscal year, and the continued coverage of original OTC and switch applications and supplements under the application fee provisions and under the FDA performance goals and procedures.

NDMA is opposed, however, to user fees that would go beyond these purposes as contrary to sound public policy. Congress' intent was clear in PDUFA 1992 that FDA user fees must not be a substitute for baseline appropriations adequate for FDA to carry out its general responsibilities, but could only be levied to supplement existing appropriations in order to expedite the drug approval process. Thus, general purpose user fees on FDA-regulated OTC companies must not be a substitute for full funding of the agency's core activities involving enforcement and compliance, or used to reduce the federal deficit.

PREPARED STATEMENT OF ROGER JOHNSON, COMMISSIONER OF AGRICULTURE, NORTH DAKOTA DEPARTMENT OF AGRICULTURE

Chairman Cochran and members of the Senate Appropriations Subcommittee on Agriculture, Rural Development, and Related Agencies. My name is Roger Johnson, and I serve as the North Dakota Commissioner of Agriculture. I request that the budget for the Northern Great Plains Research Laboratory (NGPRL) located in Mandan, North Dakota, be reinstated for the following reasons: 1. NGPRL research has substantial financial impact in North Dakota and surrounding states; and 2. NGPRL research helps provide a safe food supply.

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NGPRL RESEARCH HAS A SUBSTANTIAL FINANCIAL IMPACT IN NORTH DAKOTA AND SURROUNDING STATES

NGPRL has an overwhelming impact on agriculture in North Dakota and surrounding states. Estimations made by NGPRL staff show that the economic benefit to renewable natural resource conservation relating to research conducted at NGPRL is estimated between \$50 and \$210 million annually; implementation of NGPRL research has the potential to increase farm income by \$200 to \$360 million annually. Examples of NGPRL research programs that have great potential economic applications to North Dakota and surrounding states include: (1) conservation and tillage programs, (2) grass research and the Conservation Reserve Program, and (3) tree improvement research.

Potential economic application—conservation tillage and cropping systems

Research conducted at NGPRL has played a major role in producers changing from crop-fallow to a continuous cropping system of farming, reducing soil loss through erosion. In central and western North Dakota, summerfallow acres decreased 1,540,000 acres from 1991 to 1995, thus increasing the acreage of continuous cropping. Studies by NGPRL staff indicate about a \$10.70 per acre advantage with conventional-tillage to an \$18.80 per acre advantage with minimum tillage for continuous cropping over that of a spring wheat-fallow system. The direct economic benefit is approximately \$16.5 to \$29 million per year increase in North Dakota farm income alone.

Also, as a result of research conducted by NGPRL, 67 percent of the winter wheat produced in 1995 was in a continuous cropping production system using reduced tillage systems. The 12-year advantage of minimum-till and no-till winter wheat over conventional-till winter wheat has been 2.5 and 3.3 bushels per acre. At \$3.50 per bushel, the gross economic advantage using reduced tillage systems would be \$8 to \$11 per acre or on 26,900 acres a gross advantage of \$215,000 to \$296,000 per year in North Dakota.

Potential economic implication—conservation reserve program

Recently, Congress reauthorized the Conservation Reserve Program (CRP). Research at NGPRL has developed techniques that reduce grass stand failures. Just a 5 percent reduction in stand failures for cool-season grasses can yield savings of \$3.9 million for North Dakota and \$38.9 million nationally when considering just the acres seeded in CRP. A 9 percent reduction in reseeding for native grasses in CRP can yield a savings of \$82.6 million.

Potential economic application—tree improvement research

For the first time in North Dakota history, the entire state has been declared a disaster area due to the severe winter storms suffered in 1997. Currently, the Fifty-fifth Legislative Assembly of North Dakota is considering a bill that would provide \$5.1 million in relief to counties for snow-removal. Until being cut from the budget last year, NGPRL was involved in important research studying the use of trees as windbreaks. Tree improvement research at NGPRL was evaluating over 200 seed sources of junipers and cedars that could be utilized as living snow fences, which are 62 times cheaper than slat fences.

NGPRL played a leading role in evaluating and developing tree varieties and windbreak designs that currently protect 2.5 million acres of North Dakota cropland that NGPRL staff estimate result in yield increases totaling \$8.75 million annually.

Genetic tree improvement research at NGPRL, which is duplicated nowhere else in the country, has resulted in tree variety releases that grow faster, live longer, and are more resistant to diseases, all which improve the negative effects of ozone depletion and formation of greenhouse gases.

Windbreaks serve as an excellent measure to protect homes, livestock, roadways, and wildlife habitat. As North Dakota digs out important roadways blocked from continual blizzard snow, the importance of windbreaks and continued development of research in this area is necessary and will be needed in the future.

Potential economic applications—other research projects

Other research conducted at NGPRL includes studies into water management and irrigation, protecting the environment from contamination and reducing the amount of water used for irrigation; forage breeding and genetics, improving the quality of feed for cattle operations; and many other research projects that are necessary for protecting the environment and for providing a safe food supply in the future.

All of these research projects are part of promoting a system that looks into the emerging needs of agriculture, provides information transfer to the producers that

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utilize the research in everyday practices, and provides a more economical approach to producing the safe food supply that is important to everyone.

NGPRL PROVIDES A SAFE FOOD SUPPLY

Providing a safe food supply and studies in nutrition have become high priorities in the Agriculture Research Service. The first step in providing a safe food supply begins with research in farm production. We must continue to provide agricultural producers with a method of technology transfer so improvements can be made in the way the food supply is being raised. Efficiencies in production systems provide more resources for agricultural producers to expand operations to meet increased demands for food as the population grows. Research efforts not only help expand the food supply being raised, but also provide a safer food supply by developing systems that require less use of farm chemicals, lessening the risk to the producer, consumer, and environment.

It is my belief that the continued research at NGPRL will encourage the increased production of a safe food supply that the Midwest has always provided for this country. NGPRL serves as a clearinghouse of information for producers throughout the Midwest that are dedicated to keeping this growing nation supplied with a continued and safe food supply.

REINSTATEMENT OF THE BUDGET

Finally, I request that the budget be reinstated for NGPRL in Mandan, North Dakota.

I am aware that the United State Department of Agriculture administration will establish a commission to evaluate all the USDA ARS sites across the country to determine need in the future. I believe NGPRL should be reinstated at a minimum to continue operation at least until the appointed commission has a chance to evaluate the facility and the research programs conducted there. I am confident that the commission will find that NGPRL is an important part of the Agriculture Research Service that should be continued in the future.

Chairman Cochran and members of the subcommittee, as I have outlined in this testimony, NGPRL has a great economic impact based on the technology transfer from research to field implementation of farming practices developed to provide an increase in agricultural production that is safe for the consumer. As the public demand for clean air, pesticide free crops and water resources, roads without snow, and better conditions for wildlife increases, so to do the need for crop, forage, and tree research to meet these needs. NGPRL is the facility that is positioned well to continue to develop research and programs that will fill those needs not only in North Dakota but throughout the Midwest and across the entire nation.

PREPARED STATEMENT OF BILLY FRANK, CHAIRMAN, NORTHWEST INDIAN FISHERIES COMMISSION

INTRODUCTION

The Northwest Indian Fisheries Commission is the intertribal fisheries management organization of the tribes party to the *United States v. Washington* litigation, more commonly known as the *Boldt* decision. Our member tribes are very active in a number of fisheries arenas, including habitat protection and shellfish management.

In this testimony, we are seeking assistance from the Subcommittee in the form of additional funding to the member tribes of the Commission so as to enable them to fulfill important management objectives consistent with federal judicial opinions and treaty rights.

REQUEST

The Northwest Indian Fisheries Commission support two primary request for our member tribes:

(1) Earmark special funding of \$1 million to the member tribes of the Northwest Indian Fisheries Commission from the Department of Agriculture, Natural Resources Conservation Service (NRCS). This will be used by the tribes to perform watershed analysis and monitoring services in their Usual and Accustomed Areas in support of conservation district watershed and resource planning efforts. I his partnership of tribes and conservation districts and local landowners will prove essential to fulfilling the mandate of the NRCS, bring stability to the agricultural community and protect the salmon of the region.

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(2) An appropriations increase and directing language to the Department of Agriculture's Rural Development Administration, Industrial Development Grant Program. This request is for \$385,000 to complete the second phase of the Northwest Tribal Clam and Oyster Project: This project is supported by the Tribes in the Pacific Northwest, Washington State Departments of Health and Fisheries, and the private commercial shellfish industry.

BACKGROUND ON WATERSHED ANALYSIS AND MONITORING

Our member tribes are deeply concerned about the plight of Pacific Salmon, and are taking serious steps to address this issue consistent with their treaty protected fishing rights. Such efforts involve tribal, state, federal and private entities, and are juxtaposed onto a variety laws, including the Clean Water Act and the Endangered Species Act. To this end, the tribes are active participants in a wide array of planning and management forums, providing legal, policy and technical expertise into the coast wide salmon recovery efforts. Tribes participate in the Timber-Fish-Wildlife (TFW) process, playing the lead role in the effectiveness and ambient monitoring program that is a major part of the state of Washington salmon recovery process. Likewise, tribes actively work on the Interagency Advisory Committee (IAC) of the Northwest Forest Plan, where these efforts are integrate private, state and federal lands for effective ecosystem management.

Tribes have also played a major role in watershed analysis, bringing the cumulative effects issue forward in the TFW process and seeing to it that this tool was included in the Northwest Forest Plan. As a result, watershed analysis is now seen as the very best scientific approach to establish necessary prescriptions to protect the Pacific Salmon.

Funding from the ARCS will create additional tribal capability to serve the needs of the agricultural community as they begin to develop their responses to salmon recovery. We anticipate that the tribes will allocate these monies regionally, and integrate this effort with current state of the art efforts underway as part of the larger coast wide salmon recovery efforts. This convergence will yield synergy and be a value to the federal government as it must implement its Endangered Species Act obligations.

RESOURCE CONSERVATION AND DEVELOPMENT (RC&D) PROGRAM

We also support the Administration's proposed fiscal year 1998 appropriation for an additional \$18 million for funding of non-Federal watershed and rangeland coordinators to assist in watershed planning and rangeland conservation. Some of these monies are designed to pass through the NRCS to support and/or establish watershed councils that will work towards salmon recovery efforts in California, Oregon, Washington and Idaho. Such efforts are very consistent with tribal interests, as they will lead to the greater protection and recovery of the Pacific Salmon which the Northwest tribes depend upon for their subsistence, cultural and economic livelihood.

BACKGROUND FOR NORTHWEST CLAM AND OYSTER PROJECT PHASE II

This is the second phase of the Northwest Clam and Oyster Project. Phase one was completed this past year. Phase two has two primary components: (1) The expansion and development of remote setting of seed capability in rural areas of the Pacific Northwest; and (2) the addition of hatchery capability for additional species for seed production.

(1) *Remote Setting of Seed.*—Oyster Larvae raised at the Lummi Hatchery is the first step of production. The Oyster Larvae produced is then put into large tanks where they are combined with large volumes of cultch, in the case of oysters—shell. Manilla clams; after setting, need room to grow to a large enough size to gain the survivability necessary for commercial viability, this is best accomplished at juvenile rearing sites near the growout area.

Both these activities are limited to the Central Hatchery and would be much more efficient at on-site facilities for this phase of seed production. Far more efficiency is gained through shipping larvae and small clam seed early in their development. In the case of oysters the difference would be a small jar or ziplock bag of larvae compared with a semi-load of set seed.

When looking at a map of Washington State we are proposing that regional sites be developed for the setting and grow-out of seed at the following sites that can be used by Tribes in those areas: (1) Squaxin Island in South Sound, (2) Port Gamble in Hood Canal, (3) Sequim Bay in the Strait of Juan de Fuca and (4) Tulalip Bay in the Admiralty Inlet. The funds would build setting tanks for oysters, and up well systems for manilla clams. The estimated costs for this is a one-time capital expense

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of \$175,000 in 1998 to construct the facilities and operations cost of \$175,000 to operate the facilities for 1999–2000. Operating costs for the Lummi Seed Production would be \$100,000 for direct costs and \$30,000 for indirect expenses for each of the years 1998–2000.

(2) *Additional Species Capability.*—In Phase I the hatchery focused on manilla clam and pacific oyster production. In Phase II, the capability to produce additional oyster species, mussels,¹ and geoduck clams² would be added to the hatchery's capability. This additional level of services would require some additional capital expenses for the existing facility and training and labor costs during the development phase. The costs for this portion of the plan would be \$80,000 for each of the years 1998–2000.

CONCLUSION

We strongly request your support for these projects. I believe that our two requests are not only of great benefit to the tribes of Washington State but to Washington State as a whole.

Thank you for your consideration of our requests.

NORTHWEST SHELLFISH PROJECT

	1998	1999	2000
Construction (remote setting/juvenile rearing at four sites):			
Insulated fiberglass tanks 4 @ \$12,000	\$48,000		
Tank heaters and controls 4 @ \$4,500	18,000		
Seawater pumps and controls 4 @ \$4,000	16,000		
Concrete slab and drains 4 @ \$1,500	6,000		
Aerators and piping 4 @ \$1,500	6,000		
Upwellers 4 @ \$13,000	52,000		
Set-up and construction	29,000		
Total construction	175,000		
Juvenile rearing at four remote setting sites:			
Salaries 4 @ \$28,000		\$112,000	\$112,000
Operations including utilities 4 @ \$12,000		48,000	48,000
Miscellaneous 4 @ \$3,750		15,000	15,000
Total juvenile rearing operations at four remote setting sites ..		175,000	175,000
Hatchery operations salaries:			
Hatchery manager (.75 FTE)	27,000	27,000	28,000
Shellfish manager (.75 FTE)	20,000	20,000	21,000
Technicians (4 FTE)	69,000	71,000	74,000
Subtotal hatchery operations salaries	116,000	118,000	123,000
Fringes @ 22 percent	25,520	25,960	27,060
Total hatchery operation salaries	141,520	143,960	150,060
Operations costs:			
Utilities	25,000	25,000	27,000
Repair and maintenance	7,000	7,000	9,000
Supplies	18,000	17,560	20,000
Telephone	2,000	2,000	2,500

¹ Mussel Production in the State of Washington will exceed 1,000,000 pounds in 1997 and is expected to double in 1998. Hatchery seed is need for this expansion.

² Geoduck clam is an emerging industry that needs seed for development. This animal presently brings \$7.50 per pound live weight. A market size clam of 1.5–3 pounds is produced in 3–5 years. Sub-tidal populations are inadequate to meet market demands.

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NORTHWEST SHELLFISH PROJECT—Continued

	1998	1999	2000
Total operations costs	52,000	51,560	58,500
Capitol equipment for hatchery:			
Microscope	5,000		
Filters	8,000		
Pumps	3,480		
Monitoring system		8,000	
Upwell boxes		6,480	
Oxygen generator			1,440
Total capital for hatchery	16,480	74,480	1,440
Total project costs	385,000	385,000	385,000

PREPARED STATEMENT OF THE ORGANIZATION FOR THE PROMOTION AND ADVANCEMENT OF SMALL TELECOMMUNICATIONS COMPANIES

SUMMARY OF REQUEST

The Organization for the Promotion and Advancement of Small Telecommunications Companies (OPASTCO) seeks the Subcommittee's support for fiscal year 1998 loan levels for the telecommunications program administered by the Rural Utilities Service (RUS) in the same amounts as those contained in the Fiscal Year 1997 Agriculture Appropriations Act. The requested program levels are:

Telecommunications loans program

[In millions of dollars]

5 percent hardship loans	75
Treasury rate loans	300
Guaranteed loans	120
Rural Telephone Bank (RTB) loans	175

In addition, OPASTCO requests the Subcommittee's support for the following: (1) removal of the statutory 7 percent cap on Treasury rate loans for fiscal year 1998; (2) a prohibition against the transfer of unobligated RTB funds to the general fund of the Treasury or Federal Financing Bank; and, (3) funding of the distance learning and medical link grant and loan program at sufficient levels.

OPASTCO is a national trade association of more than 475 independently owned and operated telephone companies serving rural areas of the United States. Its members, which include both commercial companies and cooperatives, together serve over 2 million customers in 40 states. Well over half of OPASTCO's members are RUS or RTB borrowers.

Perhaps at no time since the inception of the RUS (formerly the REA) has the telecommunications program been so vital to the future of rural America. The telecommunications industry is at a crossroads, both in terms of technology and public policy. Great leaps in telecommunications technology in recent years will deliver on the promise of a new "information age." The Federal Communication Commission's (FCC) implementation of the landmark Telecommunications Act of 1996, as well as fundamental statutory changes to RUS's lending program, will expedite this transformation. However, without continued RUS support, rural telephone companies will be hard pressed to build the infrastructure necessary to bring their communities into this new age, creating a bifurcated society of information "haves" and "have-nots."

Contrary to the belief of some critics, RUS's job is not finished. In fact, in a sense, it has just begun. We have entered a time when advanced services and technology—such as fiber optics, digital switching equipment, custom calling features, and the Internet—are an expected and needed part of a customer's telecommunications service. Unfortunately, the inherently higher costs of offering such services in rural areas has not abated. Rural telecommunications continues to be more capital intensive and involves fewer paying customers than its urban counterpart. In order for

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rural telephone companies to modernize their networks and provide their customers with advanced services at reasonable rates, they must have access to reliable low-cost financing.

Furthermore, telecommunications enables applications such as distance learning and telemedicine that can alleviate or eliminate some rural disadvantages. Telecommunications can also make rural areas attractive for some businesses and result in revitalization of the rural economy. For example, businesses such as telemarketing and tourism can thrive in rural areas, and telecommuting can become a realistic employment option.

While it has been said many times before, it bears repeating that RUS's telecommunications loans program is not a grant program. The funds loaned by RUS are used to leverage substantial private capital, creating public/private partnerships. For a very small cost, the government is encouraging tremendous amounts of private investment in rural telecommunications infrastructure. Moreover, there has never been a default in the history of the lending program.

The FCC's implementation of the Telecommunications Act of 1996 will only increase rural telephone companies' need for RUS assistance in the future. The 1996 Act requires the FCC, by May 8, 1997, to release rules on universal service. The forward-looking Act defines universal service as an evolving level of telecommunications services that the FCC must establish periodically, taking into account advances in telecommunications and information technologies and services. One of the principles for universal service established in the 1996 Act is that consumers in rural areas have access to advanced telecommunications and information services that are reasonably comparable to those services provided in urban areas at reasonably comparable rates. At present, it is uncertain whether the FCC will provide a "sufficient" mechanism, as required by the Act, to achieve this urban/rural comparability goal. Long before the enactment of the 1996 Act, RUS has been the great facilitator of a dynamic universal service concept in rural areas, providing rural telephone companies with the financing to fund technological improvements. RUS now has an essential role to play in the implementation of the new law, as it will complement new funding mechanisms established by the FCC and bring rural America closer to the federally mandated goals.

Working in tandem with the 1996 Act, the Rural Electrification Loan Restructuring Act of 1993 (RELRA) will further help to ensure the comparability of telecommunications service between urban and rural America. As a prerequisite to eligibility for insured and RIB loans, RELRA requires that every state have an RUS approved modernization plan which provides a timeline for the improvement of the state's telecommunications network and that the purpose of every loan is consistent with achieving the requirements of the borrower's state plan. Implementation of these plans will generate additional loan demand as rural telephone systems strive to meet these increased service objectives in the rural areas they serve.

One of the most vital components of RUS's telecommunications loans program is the 5 percent hardship loans. These loans provide below-treasury rate financing to telephone companies serving some of the most sparsely populated, highest cost areas in the country. The commitment these companies have to providing modern telecommunications service to everyone in their communities has made our nation's policy of universal service a reality and, in many cases, would not have been possible without RUS's hardship loan program. The RUS reports that through the second quarter of fiscal year 1997, they had already approved \$52 million in hardship loans—or almost 70 percent of their authorization—and had an additional \$84 million in applications on hand. For fiscal year 1997, the government subsidy to support a \$75 million loan level was a mere \$1.2 million. Given the need and demand for this essential program, it is critical that the loan level be maintained at \$75 million for fiscal year 1998.

With regard to RUS's Treasury rate loan program, OPASTCO supports the removal of the 7 percent ceiling on these loans for fiscal year 1998. This Subcommittee appropriately supported language in the Fiscal Year 1996 Agriculture Appropriations Act to permit Treasury rate loans to exceed the 7 percent per year ceiling contained in the authorizing act. This language was continued in the fiscal year 1997 Act. Long-term Treasury interest rates have already edged up past the 7 percent mark and were they to remain there, adequate subsidy would not be available to support the Treasury rate loan program at the authorized levels. Therefore, it is important that the Subcommittee ensure that this language is included in the appropriations bill again this year.

OPASTCO also urges the Subcommittee to reinstate the language introduced in the Fiscal Year 1997 Agriculture Appropriations Act prohibiting the transfer of any unobligated balance of the RTB liquidating account to the Treasury or the Federal Financing Bank which is in excess of current requirements and requiring the pay-

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ment of interest on these funds. As a condition of borrowing, the statutory language establishing the RTB requires telephone companies to purchase Class B stock in the bank. Once all loans are completely repaid, a borrower may then convert its Class B stock into Class C stock. Thus, all current and former borrowers maintain an ownership interest in the RTB. As with stockholders of any concern, these owners have rights which may not be abrogated. The Subcommittee's inclusion of the aforementioned language into the fiscal year 1998 appropriations bill will ensure that RTB borrowers are not stripped of the value of this required investment.

In addition to RUS's telecommunications loans program, OPASTCO supports adequate funding of the distance learning and medical link grant and loan program authorized in the Federal Agriculture Improvement and Reform Act of 1996. Through this worthy program, rural students will gain access to advanced classes which will help them prepare for college and jobs of the future. Also, rural residents will gain access to quality health care services without traveling great distances to urban hospitals. The Agriculture Act authorizes \$100 million for each of the fiscal years 1996 through 2002. Loans are made at the government's cost-of-money, which should help to meet demand for the program in the most cost effective way. In light of the Telecommunications Act's requirement that schools, health care providers, and libraries have access to advanced telecommunications services, sufficient targeted funding for this purpose is essential.

CONCLUSION

The development of the nationwide telecommunications network into an information superhighway, as envisioned by policymakers, will help rural America survive and prosper in any market—whether local, regional, national, or global. However, without the availability of low-cost RUS funds, building the information superhighway in communities that are isolated and thinly populated will be untenable. By supporting the RUS telecommunications programs at the requested levels, the Subcommittee will be making a significant contribution to the future of rural America at a negligible cost to the taxpayer.

LETTER IN SUPPORT OF THE PESTICIDE DATA PROGRAM

MARCH 20, 1997.

Hon. THAD COCHRAN,
*Chairman, Subcommittee on Agriculture, Rural Development, and Related Agencies,
Committee on Appropriations, U.S. Senate, Washington, DC.*

DEAR CHAIRMAN COCHRAN: We the undersigned organizations strongly recommend that \$10.24 million in funding be approved for fiscal year 1998 for the Pesticide Data Program (PDP) within USDA's Agricultural Marketing Service (AMS) as requested in the President's budget. AMS and its partnering state agencies have the systems, equipment, and experience to collect, test, and report the vast quantities of residue data generated by the PDP. This effective and efficient program is needed to carry out residue testing to ensure the continued safety of our food supply.

In fiscal year 1997, the PDP was funded at \$11.581 million. The President's request for \$10.24 million for fiscal year 1998 already represents an 11.6 percent savings to the American taxpayer.

Since 1991, the USDA has utilized PDP to collect reliable, scientifically-based pesticide residue data that benefit consumers, food processors, crop protection pesticide producers, and farmers. By using good accurate residue data, U.S. Environmental Protection Agency (EPA) regulatory decisions can be based on a more accurate assessment of risk. Without the actual residue data, overly conservative theoretical assumptions of risk could lead to withdrawal of pesticide uses that pose no actual human health risk. The collection of scientifically-based pesticide residue data also allows for a more accurate assessment of the risk to infants and children.

In fact, Section 301(c) of the Food Quality Protection Act (FQPA) requires the Secretary of Agriculture to ensure that the residue data collection activities conducted by the Department of Agriculture in cooperation with EPA and the Department of Health and Human Services, provide for the improved collection of pesticide residues and the increased sampling of foods most likely consumed by children.

The USDA is the federal entity best equipped to collect the data and administer PDP since it already has working agreements with ten states that process data representing approximately 75 percent of the nation's fruits and vegetables, as well as large portions of the wheat and milk program. In 1997, the program added orange juice, pears, and winter squash. In 1998, other crops will be added.

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Under the guidance of AMS, PDP has provided considerable assistance in confronting barriers to the international trade of American agricultural commodities and in the establishment of international standards. By developing a statistically reliable testing system, AMS has used the PDP residue testing results to convince foreign governments that our food is safe, thus enhancing our ability to increase U.S. agricultural exports.

We believe that full funding of USDA's PDP will ensure the program continues to play an important role in collecting pesticide residue data consistent with the Congressional intent of the recently passed FQPA. We strongly believe that the responsibility for the collection of pesticide residue data and supporting appropriations rightfully belongs within the jurisdiction of AMS.

We look forward to working with you to secure full funding for the USDA Pesticide Data Program within AMS in the fiscal year 1998 budget. Thank you for your efforts on this important matter.

Sincerely,

Agricultural Retailers Association; American Bakers Association; American Crop Protection Association; American Cyanamid Company; American Farm Bureau Federation; American Feed Industry Association; American Mosquito Control Association; American Seed Trade Association; American Soybean Association; Apple Processors Association; California Citrus Quality Council (CCQC); California Department of Food and Agriculture; Chemical Producers and Distributors Association; Colorado Apple Administrative Committee; Colorado Department of Agriculture; Colorado Onion Association; Colorado Potato Administrative Committee—Area III; Del Monte Foods; DuPont Agricultural Products; Farmland Industries, Inc.; Florida Citrus Mutual; Florida Citrus Processors Association; Florida Department of Agriculture and Consumer Services; Florida Farm Bureau Federation; Florida Fruit & Vegetable Association; Florida Strawberry Growers Association; Florida Tomato Exchange; Griffin Corporation; International Sanitary Supply Association; Jellinek, Schwartz & Connolly, Inc.; National Agricultural Aviation Association; National Association of State Departments of Agriculture; National Corn Growers Association; National Cotton Council; National Food Processors Association; National Grain Sorghum Producers; National Grange; National Watermelon Association; New York State Department of Agriculture & Markets; Potato Growers of Washington, Inc.; Produce Marketing Association; Professional Lawn Care Association of America; Rohm and Haas Company; Southern Crop Protection Association; Texas Citrus Mutual; Texas Corn Producers Board; Texas Farm Bureau; Texas Produce Association; Texas Rice Producers Legislative Group; Texas Vegetable Association; Turfgrass Producers International; United Fresh Fruit and Vegetable Association; U.S. Apple Association; Western Growers Association; Western Pistachio Association; Wisconsin Department of Agriculture, Trade and Consumer Protection.

PREPARED STATEMENT ALAN F. HOLMER, PRESIDENT, PHARMACEUTICAL RESEARCH AND MANUFACTURERS OF AMERICA

Mr. Chairman and Members of the Subcommittee, I am Alan F. Holmer, President of the Pharmaceutical Research and Manufacturers of America. PhRMA represents the country's major research-based pharmaceutical and biotechnology companies, which are leading the way in the search for new cures and treatments that will enable patients to lead longer, healthier, happier, and more productive lives. I appreciate this opportunity to submit a statement for the record on our recommendations on the fiscal year 1998 budget for the Food and Drug Administration.

PhRMA urges funding FDA at the level of appropriations enacted for the current fiscal year, adjusted for inflation, and designating similar level funding for the human drug-approval process. In particular, we strongly support keeping budget authority for FDA salaries and expenses at \$820 million, adjusted for increases in the cost of living. Of this amount, we also urge that the Committee designate at least \$263 million for the human drug-approval process, which would include \$110 million that our industry is willing to pay in user fees under a reauthorized Prescription Drug User Fee Act (PDUFA) of 1992.

We are deeply concerned that the Administration's budget proposal for FDA in fiscal year 1998 would reduce budget authority by over \$68 million—which would represent an 8 percent cutback in federal appropriations, including a 13 percent cut

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in the FDA's budget for human-drug approvals. These reductions would occur entirely in the salaries and expenses account of FDA, which would translate directly into reduced professional staff resources.

Funding for FDA professional staff resources constitutes the major portion of the agency's budget. The work of qualified and dedicated staff is critical to the FDA's efforts to streamline regulatory activities that promote and protect the health and safety of the American people.

The Administration's budget proposal appears to provide a 7 percent increase in FDA resources, but this is misleading because it includes \$131 million in user fees for other industries that have been previously proposed but consistently rejected by Congress. It is irresponsible to suggest that FDA's budget for the next fiscal year will be increased when that increase is based on user fees that have never been authorized by Congress.

LEVEL FUNDING OF FDA REQUIRED TO CONTINUE PDUFA

We are especially concerned that FDA's baseline appropriations for salaries and expenses be maintained at least at the current level because such funding is required to continue PDUFA, which is scheduled to expire on September 30, 1997.

PDUFA represented an historic agreement between Congress, the FDA, and the research-based pharmaceutical and biotechnology industries to improve FDA's drug-approval process so that new medicines could be made available sooner to patients. The law is based on four bedrock principles: It (1) represents a long-term commitment by Congress, (2) requires that the fees be additive to the FDA's baseline appropriations, not a substitute for such appropriations, (3) dedicates the fees to the drug-approval process, and (4) provides quantifiable performance standards. Under the 1992 law, industry agreed to pay \$327 million in user fees during 1993–1997, which enabled FDA to hire 600 additional reviewers.

To continue PDUFA, funding for FDA for fiscal year 1998 must be at least at the current level of \$820 million, adjusted for inflation, including at least \$263 million designated for the human drug-approval process, as described above. This level of funding is essential under the bedrock principle that user fees must be additive to baseline appropriations, not a substitute for such appropriations. Otherwise, the fees would represent an additional tax on the industry and would simply be a means to achieve general deficit reduction.

The Administration's budget proposal also would undermine the PDUFA program in another way. The Administration's proposal would reclassify user fees from "off-setting collections" to "governmental receipts." Such a reclassification would, in effect, be a new tax and would allow industry user fees to be expended for any Government purpose. That would contravene the user-fee principles that the fees be additive and dedicated to the drug-approval process. For this reason, PhRMA strongly opposes the reclassification of user fees as proposed by the Administration.

Without level funding for FDA, the 600 additional reviewers hired under the user-fee program would have to be dismissed. This would cause a substantial increase in drug review times to the detriment of patients, reversing the progress made under the 1992 law in cutting review times nearly in half. With industry spending \$19 billion on R&D this year to develop new cures and treatments and U.S. taxpayers providing \$13 billion to NIH for biomedical research, it would make no sense to cut FDA's budget by \$68 million and delay approval of these new medicines.

PDUFA SHOULD BE RENEWED FOR FIVE MORE YEARS

Just as the 1992 user-fee law represented a long-term commitment by Congress for five years, a reauthorized PDUFA should be for five more years. A five-year extension will demonstrate Congress' continuing long-term commitment to ensuring that new life-saving, cost-effective medicines are made available to patients as quickly as possible. It will allow FDA to continue operations without interruption and provide the job security necessary to retain and hire the best reviewers. And it will enable FDA to plan ahead, allocate resources, and implement agreed-upon timelines, performance goals, and other program objectives in an incremental way, just as it has under the 1992 law.

On the other hand, a one-year extension would raise doubt about Congress' long-term commitment to the user-fee program and slow the momentum that FDA has generated under the program. A one-year extension would make it difficult for FDA to retain and hire the best reviewers, undermine the careful, incremental way in which FDA has planned to implement changes, and require the agency to waste valuable staff time again next year in addressing reauthorization of the user-fee law.

The results of the 1992 user-fee law strongly support a five-year reauthorization. In 1992, the mean approval time for a New Drug Application (NDA) was 29.2

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months. In 1996, for drugs for which user fees were paid, the mean approval time for an NDA was nearly cut in half to 15.5 months. In 1992, the FDA approved 26 New Molecular Entities (NME's). In 1996, the agency approved more than twice that figure—53 NME's—and nine new biologics compared to six in 1992.

Few Government initiatives have been so successful for so many people in such a short period of time. PDUFA has been a winner for Congress, the FDA, industry, and—most of all—millions of American patients.

Among the new medicines approved in 1996 were two new protease inhibitors and a non-nucleotide transcriptase inhibitor to fight HIV and AIDS, as well as a drug to combat a leading cause of blindness in AIDS patients; four new drugs for orphan diseases; five new anti-cancer drugs; the second new drug for Alzheimer's Disease; two new mental-health medicines—an anti-depressant and an anti-psychotic; an important new cholesterol-lowering drug; two new medicines in a new class of asthma drugs; two new treatments for multiple sclerosis; two new drugs for glaucoma, and the first new insulin product in 14 years.

Pharmaceutical companies are investing almost \$19 billion this year, 21 percent of sales, to discover and develop many more new drugs that will save lives—and money. Hundreds of medicines and vaccines already are in the pipeline, including 107 in development for heart disease and stroke, 132 for older Americans, 215 for cancer, 122 for AIDS, 125 for infectious diseases, 64 for mental illness, and 284 biotechnology products.

Renewal of PDUFA would ensure that these and other pipeline drugs are developed and approved more quickly; failure to renew the law would delay their development and approval. The law must be renewed for five more years so that the agency can continue to move forward in a steady, carefully planned, step-by-step way without interruption.

PDUFA-II WOULD SAVE 10–16 MONTHS

As effective as PDUFA-I has been, there is room for improvement. PDUFA-I focused on the drug-approval process. It did not affect the clinical-development phase of the regulatory process.

The drug discovery and development process—which now typically takes a total of 15 years at an average cost of about \$500 million a drug—is divided into three distinct phases. The first phase, following discovery of a new compound, is devoted to early research and preclinical testing. Thereafter, during the clinical-development phase, the new compound is tested in humans for safety and efficacy in large, complex trials. Finally, in the drug-approval phase, FDA reviews a drug sponsor's NDA.

During the past several months, industry and FDA have developed a legislative framework for Congress to consider that would build on the substantial progress made under the 1992 law.

For the first time, the clinical-development phase would be addressed, as well as the drug-approval phase. Under the framework, FDA would undertake more comprehensive improvements and establish quantifiable, measurable timelines and performance goals, in exchange for which industry would increase its user-fee payments by more than 21 percent over those set forth in the 1992 law.

Industry regulatory experts estimate that PDUFA-II would save 10 to 16 months in drug development and review time.

To complement reauthorization of the user-fee law, the pharmaceutical and biotechnology industries have developed other FDA-improvement proposals that reflect consensus views that emerged in Congress during the past year and that would structurally change critical agency practices and procedures. The aim of the provisions in the PDUFA framework and the FDA-improvement proposals is the same: to make new medicines available sooner to patients.

CONCLUSION

PhRMA strongly supports level funding for FDA in fiscal year 1998 compared to fiscal year 1997, adjusted for inflation. The agency needs these appropriations to fulfill its many and vital public health responsibilities, including implementation of an improved and renewed user-fee law. A five-year, reauthorized user-fee program, combined with consensus FDA-improvement provisions, would enable the agency to continue the progress it has achieved during the past five years in making new life-saving, cost-effective medicines available more quickly to waiting patients.

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PREPARED STATEMENT OF DR. TED R. BATTERSON, DIRECTOR, NORTH CENTRAL
REGIONAL AQUACULTURE CENTER

Thank you Mr. Chairman and Members of the Subcommittee for allowing me this opportunity to submit testimony on behalf of the Regional Aquaculture Center Program. We are truly appreciative of the Subcommittee's support for this program over the last decade. Funding appropriated for the Regional Aquaculture Centers in fiscal year 1997 was \$4 million. I am submitting this testimony to urge you to increase the support for the Centers to the fully authorized level of \$7.5 million for fiscal year 1998.

The mission of the Regional Aquaculture Centers is to support aquaculture research, development, demonstration, and extension education to enhance viable and profitable U.S. aquaculture production which will benefit consumers, producers, service industries, and the American economy.

The U.S. aquaculture industry continues to be one of the fastest growing sectors within U.S. agriculture. Production has increased 77 percent in the 10-year period from 1985 to 1994. Production in 1994 reached 665 million pounds and generated approximately \$751 million for producers. Final sales value in 1993 were estimated to be \$5 billion; direct and indirect economic impact was estimated at \$8 billion. Yet, anticipated growth in the industry, both in magnitude and in species diversity, continues to fall short of expectations.

Five Regional Aquaculture Centers have been established in response to Congressional legislation. The North Central Regional Aquaculture Center (NCRAC) came into existence in February 1988. It serves as a focal point to assess needs, establish priorities, and implement research and extension educational programs in the twelve state agricultural heartland of the United States which includes Illinois, Indiana, Iowa, Kansas, Michigan, Missouri, Minnesota, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin. NCRAC also provides coordination of inter-regional and national programs through the National Coordinating Council for Aquaculture. The council is composed of directors of Regional Aquaculture Centers and is chaired by a representative of the U.S. Department of Agriculture.

The fertile North Central section of the country produces abundant grains and soybeans that can be processed for fish feeds. We also have spectacular water resources for aquaculture within our boundaries. These include U.S. portions of four of the five Great Lakes, and rivers and streams that make up the Missouri, Ohio, and Upper Mississippi River drainages. The majority of the 62 million people residing in this region are concentrated on these water bodies. They have a long tradition of using fish as a source of protein in their diets.

In 1995, an estimated 926 million pounds of fish and shellfish were consumed by residents of the North Central Region. On the supply side, probably less than 5 percent of regional consumption can be accounted for by commercial capture fisheries and aquaculture ventures from our lakes and rivers. Consequently, fish consumption in the North Central Region was a major factor in the \$3.5 billion U.S. trade deficit in edible fishery products reported by the U.S. Department of Commerce for 1995.

I would like to suggest that the time is clearly at hand to move aggressively to increase regional aquaculture production. We also need processing technology and market development programs to make use of new and nontraditional aquaculture species and products.

The aquaculture community of the North Central Region is very appreciative of the steps Congress has taken to improve our fish supplies and reduce the trade deficit in fish products. USDA's Regional Aquaculture Center Program is one such initiative. NCRAC works with the other four centers on an integrated approach to a well developed and sustainable aquaculture industry in the U.S.A. and its territories. Programs of the centers are driven by needs of regional industries, articulated through strong Industry Advisory Councils. Top-notch teams of research and extension specialists from universities and public agencies in the North Central states began executing plans of work to solve problems of the industry in May 1989. Work is accomplished using in-place people and facilities. No expenditures are made on brick-and-mortar or institutional overhead. NCRAC has funded a number of projects involving numerous researchers, extension specialists, and collaborators from universities, public agencies, and the private sector. Projects on the culture of trout, hybrid striped bass, walleye, yellow perch, and sunfish have been the thrust of the program, including the economic viability of such aquacultural species. Work on crayfish, baitfish, and aquaculture waste management have also been undertaken. Aquaculture specialists within USDA's Extension Service are making information from these projects available in the region and across the country through a variety of delivery systems, including an aquaculture network information center

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on the World Wide Web (AquaNIC; <http://www.ansc.purdue.edu/aquanic/>) and satellite teleconferencing.

While a good start has been made to serve needs of the industry and consumers, additional regional problems of high concern are left unattended. Environmentally sound cultural practices, least-cost nutrition for newly emerging species, fish health, and food safety are among them. On hold, is a large pool of expertise in our publicly funded universities and agencies that can deal with these and other concerns facing the aquaculture community.

Mr. Chairman, and Members of the Subcommittee, thank you for your support of the Regional Aquaculture Center Program. Funding over the past years has been put to good use in this program. We respectfully request that funding at the authorized level of \$7.5 million be provided so that this important program can conduct the full range of activities necessary for development of the industry and continued reduction of our large trade deficit.

PREPARED STATEMENT OF STEVE CHAIKIN, OWNER, MOLOKAI SEA FARMS,
KAUNAKAKAI, HI

Mr. Chairman and Members of the Subcommittee: Thank you for the opportunity to submit testimony on behalf of the Regional Aquaculture Centers. I am a member of the Industry Advisory Council of the Center for Tropical and Subtropical Aquaculture and the owner of Molokai Sea Farms in Hawaii.

In these times of fiscal restraint, it is important to support those areas of business—including the business of agriculture—that have proven track records of industry growth. Aquaculture is the fastest growing segment within agriculture, and I believe that the Regional Aquaculture Centers have played a vital role in making that growth possible.

A major impetus in the growth of aquaculture has been diminishing quantities of wild stocks of many seafood species. Depletion of wild seafood stocks is expected to continue to be a major factor in the growth of aquaculture. Although this is encouraging news for aquaculture farmers, the reality is that the industry can only grow as fast as the available technology. Much remains to be learned about culture technology of many high value stocks and about disease management for those species for which culture technology has been developed.

As a direct result of one of the Center for Tropical and Subtropical Aquaculture's projects, the Food and Drug Administration approved the use of formalin in shrimp hatcheries. I derived immediate financial benefit from this approval, which allowed me to use formalin to protect my shrimp crops from certain disease problems that could have otherwise devastated my farm and, quite possibly, my ability to stay in business.

In addition, work done under the project titled "National Coordinator for Aquaculture New Animal Drug Applications," which is partially funded by the Center for Tropical and Subtropical Aquaculture and three other Regional Aquaculture Centers, has expedited Food and Drug Administration approval for the use of Human Chorionic Gonadotrophin as a fish spawning aid and for the use of formalin to control protozoa and fungi on fish and fish eggs.

My commercial aquaculture farm expanded its product line to include two additional species. The first is Pacific threadfin, a high value species, and the second is milkfish, which is a prized food-fish in local ethnic markets and may have potential as bait for tuna fishing vessels. This expansion was made possible only because of advances in larval rearing and growout technology resulting from projects funded by the Center for Tropical and Subtropical Aquaculture.

These are but a few examples of the fine work being done by the Regional Aquaculture Centers. It is my hope that this subcommittee will allow the success of the Centers to continue and grow by funding the Centers at the authorized funding level of \$7.5 million.

As we say in Hawaii, mahalo nui loa—thank you very much—for the opportunity to submit this testimony.

PREPARED STATEMENT OF WILLIAM K. HERSHBERGER, DIRECTOR, WESTERN
REGIONAL AQUACULTURE CENTER, UNIVERSITY OF WASHINGTON

Mr. Chairman and Members of the Subcommittee: I wish to speak on behalf of the Western Regional Aquaculture Center (WRAC), one of the five Regional Aquaculture Centers established through the U.S. Department of Agriculture to support and encourage aquaculture research, development and extension programs. The concept of cooperative and collaborative regional programs has special importance in

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enhancing the viability and sustainability of an industry such as aquaculture with increasing national and international economic importance. From my perspective as a newly appointed Director of the WRAC Administrative Office and an active participant in aquaculture via research and development, it is apparent that the growth in aquatic animal and plant production and the increased interest in these commodities by other sectors of the food production will continue with a cooperative approach to solving constraints as they arise.

The twelve states in the western region encompass a very large geographic area (about 1.8 million sq. mi.) and a diverse array of terrestrial and aquatic environments that stretch from the Arctic circle to the desert southwest. This diversity is reflected somewhat in the number of aquatic species produced by the aquaculture industry in the western region (15 species) and the variety of products marketed. With such variety a major challenge to advancing the industry is in defining and placing the appropriate research emphasis on the most important problems. The regional approach fostered by this USDA program has facilitated the identification of the common needs of major segments of the aquaculture production industry and the development of research and extension programs to address these.

An approach to WRAC project development has been devised whereby input from the aquaculture industry is the paramount factor. Impediments or constraints to the production of aquatic species are identified by a balanced group of industry representatives from the region. Through interaction with a technical committee comprised of aquaculture researchers from a variety of disciplines and extension experts, the industry-defined areas are developed into projects that will address the problem(s) identified. This process, plus the mandate for participation of researchers from two or more states has led to an effective and innovative program that addresses constraints to aquaculture production across the western region.

A side benefit from this regional approach to aquaculture research and development has been the regular communication among various segments of the aquaculture community. As a researcher, I was able to participate in annual meetings among the investigators in our project group (a function strongly encouraged by WRAC). This resulted in many new approaches that were used in our project and maintained a vitality in the group that assisted the realization of the project goals.

Maintaining vitality and realizing progress in the production of aquatic plants and animals will continue to be important in the future. It is well established that the global harvest of edible seafood from the natural environment via the traditional capture fishery has leveled out at about 60 million metric tons. Projections for worldwide consumption of fish and shellfish point toward a steady increase; annual per capita consumption in the United States between 1980 and 1995 increased by 20 percent (12.5 lbs./person in 1980 to 15.0 lbs./person in 1995). In order to meet these demands the United States has increased imports from outside our country, which further raises an already substantial trade deficit (for non-manufactured goods, it is second in magnitude only to petroleum products). A lot of developing countries with cheap labor and fewer environmental constraints than the United States have encouraged the development of aquaculture to take advantage of increasing global demands for fish and shellfish; in many cases this is accomplished with governmental incentives and financial support. Establishment of the five Regional Aquaculture Centers by Congress provided greatly needed support for aquaculture research and extension activities, which had previously been largely overlooked. This has been a significant step to make U.S. aquaculture production more competitive in the international marketplace.

Initiating such increased competitiveness is, perhaps adequate reason for continuing support of the existing five Regional Aquaculture Centers. However, much also needs to be done with regard to enhancing research support, technology development, and communication infrastructure on national, regional and local levels. Although the demand for seafood is likely to grow in the United States, economic viability and stability will be certain only with the coordinated and cooperative efforts of the entire aquaculture community. The Regional Aquaculture Centers have the appropriate structure and are poised in a very enviable position to take on and accomplish this task.

Mr. Chairman and Members of the Subcommittee, I thank you for your continuing support. However, we have a big job ahead of us if aquaculture production in the United States is to achieve its potential in a sustainable and viable manner. I urge you to support efforts to increase funding for the five existing Regional Aquaculture Centers to the full authorized level of \$7.5 million. Thank you for giving me the opportunity to provide this testimony.

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PREPARED STATEMENT OF DAVID MOREHOUSE, PRESIDENT, MOREHOUSE BAIT FARMS

Mr. Chairman and members of the Subcommittee, the following is an appeal to increase the amount of support to the five Regional Aquaculture Centers (RAC) to the original authorized amount of \$7.5 million.

I am sure you are aware of the declining fisheries in the worlds oceans, the increased demand for seafood and the devastating effect on our nations balance of trade. The deficit, caused by seafood imports, are second only to oil imports when speaking of natural products that are imported. This amount, in some years, has approached \$9 billion.

To meet the demands for seafood, aquaculture has become the fastest growing segment of America's agriculture industry. Aquaculture's future, as well as it's past, needs support from universities, regulators, marketing, production and extension resources that only research and development can give. This support has as one of the cornerstones the need for funding, which has been met through the regional aquaculture centers.

Here in the northeast, where we are limited in production by climatic conditions, enclosed systems are being developed which increase production and quality while lowering the risks from disease, predation and climate. Research and development is continuing to fuel the technology breakthroughs needed by the aquaculture industry.

I have not stated statistics, of the situation, to support this request only because others have. However, as a 35 year veteran of private aquaculture, I know the importance of these centers. As past chairman of the Northeastern Center and past president of the New York State Aquaculture Association, I have first hand knowledge of the national importance of these centers as well as their international impact on aquaculture.

Mr. Chairman, members of the Subcommittee, I urge you to not only support Regional Aquaculture Centers at their present level but to increase the level to the authorized level of \$7.5 million.

PREPARED STATEMENT OF LESTER W. MYERS, PRESIDENT AND GENERAL MANAGER,
DELTA WESTERN, INC.

Mr. Chairman and Members of the Subcommittee, we thank you for the opportunity to submit testimony in support of the Regional Aquaculture Centers. My name is Lester Myers. I own and operate a catfish farm near Inverness, Mississippi, and am President and General Manager of Delta Western, Inc., Indianola, Mississippi, the largest catfish feed mill in the United States.

The aquaculture industry in the United States has an urgent need for new technology to reduce production costs and make it more competitive in the global market. For the past several years, I have been actively involved with the Southern Regional Aquaculture Center as Chairman of the Industry Advisory Council, and I feel that the Regional Aquaculture Center program is well suited to help meet that need. Already, results from the Regional Center projects are having a significant impact on domestic aquaculture. I believe this success is attributable to three characteristics that set the Regional Aquaculture Centers apart from other publicly funded programs.

First, the activities of the Regional Centers are industry-driven. The Center's activities are initiated by the Industry Advisory Council, which consists of producers, marketing personnel, bankers, and other individuals with fiscal interests in aquaculture. The Industry Advisory Council provides an open forum for input from private and public sectors which is then incorporated into annual and ongoing plans for the Center. As such, the genuine needs of the industry are addressed rather than the needs as perceived by scientists or government officials.

Second, allocation of funds through the Center is a very deliberate process. Industry problems that are identified by the Industry Advisory Council are discussed within the Center's Technical Committee, which consists of aquaculture research and extension personnel from across the region. Priority issues are then refined by committees of scientific and industry experts and further focused during open deliberations with prospective project participants. Project proposals that result from this process are then thoroughly reviewed for relevance and scientific rigor by experts from within and outside the region. This methodical process assures that only priority issues are addressed and that the approach used to solve the problem is thorough and carefully developed.

Third, the Center's programs are regional in nature, rather than of local interest only. It is the policy of the Center that the issues addressed must be of regional significance and that the resulting project involves participation from institutions

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from at least two states within the region. In reality, most Center projects involve institutions from at least seven states within the region. This approach makes it possible for Centers to address problems that require more personnel, equipment, and facilities than are generally available at one location. It also makes better use of limited resources and a saving of funds relative to funding of independent, uncoordinated projects at many different locations. Accordingly, it is possible to bring the best scientific talent in the region to bear on priority problems in an extremely cost-effective manner.

In summary, representatives of the U.S. aquaculture industry are convinced that the Regional Center programs are highly valuable and productive. Additional new research findings will help insure future success for aquaculture production in the United States. The authorized level of funding for the five Regional Aquaculture Centers is \$7.5 million annually. The total annual appropriation for the Centers for fiscal year 1997 was \$4.0 million, or \$800,000 for each of the five Regions. We strongly request your consideration in the fiscal year 1998 budget to provide the full authorized level of \$7.5 million for the existing five Centers to support these extremely important and effective programs.

On behalf of the U.S. aquaculture industry, we thank you for the opportunity to present testimony in support of the Regional Aquaculture Centers, and express our sincere appreciation for the support you have provided in previous years. Again, we would like to emphasize that significant benefits have already been provided from work conducted by these Centers and additional funding is urgently needed by our industry.

PREPARED STATEMENT OF CRAIG S. TUCKER, DIRECTOR, SOUTHERN REGIONAL
AQUACULTURE CENTER

Thank you Mr. Chairman and other Members of the Subcommittee for the opportunity to provide testimony in support of the Regional Aquaculture Centers. A strong domestic aquaculture industry offers significant economic and social benefits to the citizens of the United States. Domestic aquaculture can meet the ever-increasing demand for fishery products and help conserve ocean resources while reducing our dependency upon foreign suppliers of fish and shellfish. Enhanced aquaculture development in the United States can be achieved through a partnership among elements of the private sector, state and local public institutions, and the federal government. Such a partnership is the distinguishing characteristic of the Regional Aquaculture Center program.

The Regional Aquaculture Center program provides a unique and extraordinarily effective mechanism for assessing industry needs, establishing priorities, and implementing regional research and extension programs. Beyond that simple operational description, the characteristics that distinguish the activities of the Regional Aquaculture Center from that of other organizations are:

- Priority issues are identified by industry representatives familiar with aquaculture in the region;
- The issues that are addressed require more scientific expertise and facilities than are generally available at one location; that is, a team effort using the scientific resources of two or more institutions is required to solve the problem;
- Projects are planned and conducted as concerted efforts in which the participating research and extension scientists are mutually responsible for accomplishing the objectives; and
- Projects make use of personnel, facilities, and equipment already existing within the region, thereby reducing the administrative and overhead costs of conducting the work.

These characteristics make it possible to address important practical problems in a cost-effective manner. This is exemplified by the following three examples of recent work sponsored by the Southern Regional Aquaculture Center.

Food safety.—This multidisciplinary study involved scientists from institutions in eight states in the Southern Region. The goal of this proactive project was to identify real and potential food safety issues and to ensure and promote high quality aquaculture food products through educational activities. This was a highly successful project that provided a strong endorsement for the safety of farm-raised aquaculture products.

Aquaculture effluents.—This was another multidisciplinary, proactive study to examine potential environmental problems with water discharged from aquaculture facilities. The project involved scientists from institutions in nine states. The results of the project showed that aquaculture can be conducted with a minimal impact on

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the environment and provided management techniques that can be used to minimize waste discharge from farms.

Improving nutrition.—Researchers in nine states are collaborating on a project to identify means of reducing feed costs, improving farm profitability, and increasing efficiency of feed utilization. Results have been impressive and indicate that simple changes in diet formulation can significantly reduce costs of feeding catfish, striped bass, and baitfish. Several of these improvements have already been implemented in commercial production.

Although producers from across the Region appreciate the practical results obtained from projects sponsored by the Center, benefits of the program extend far beyond immediate problem-solving. Through the cooperative approach to work fostered by the Center, existing research and extension linkages within the region are strengthened, which enhances interregional cooperation in other areas of endeavor. Also, support provided by Regional Aquaculture Center programs has been effective at leveraging other funding opportunities at participating institutions, which has enhanced overall research productivity beyond the immediate area of work supported by the Centers.

In summary, I believe that the Regional Center programs are highly productive and provide a cost-effective means of addressing important regional constraints to industry growth. Aquaculture industry representatives and research and extension personnel from throughout the Southern Region have embraced the Center's program as an effective and efficient means of ensuring future success for the industry. The authorized level of funding for the five Regional Aquaculture Centers is \$7.5 million annually. Over the last six fiscal years, the total annual appropriation for the Centers has been level at \$4.0 million, or \$800,000 for each of the five Regions. Each year that level of funding falls increasingly short of meeting the Centers' needs because the cost of conducting research and educational programs has risen sharply over that period. Accordingly, I respectfully request that you consider providing the full authorized level of \$7.5 million in fiscal year 1998 for the existing five Centers to support these extremely important and effective programs.

On behalf of the aquaculture industry in the Southern Region, I thank you for the opportunity to present testimony in support of the Regional Aquaculture Centers, and express our sincere appreciation for the support you have provided in previous years.

PREPARED STATEMENT OF JAMES T. ELFSTRUM, MANAGER, REGULATORY AFFAIRS,
RHÔNE-POULENC, INC.

We are writing to urge you and your colleagues on the subcommittee to support funding the Public Law 480 program in your upcoming deliberations at a level which will allow this valuable humanitarian assistance program to maintain its effectiveness.

Rhône-Poulenc is a multi-faceted general chemical company whose products include a wide array of primarily mineral-based food additives. We have production facilities or offices in 21 states, employing about 6,800 individuals. Both Rhône-Poulenc and its predecessor company, Stauffer Chemical, have a long history of supplying mineral supplements for inclusion in many of the blended and processed foods utilized in the Public Law 480 program. In fact, Stauffer Chemical worked cooperatively with program officials in the development and testing of many of the Public Law 480 foods. Over the years, we have also made substantial donations of nutrients to private voluntary organizations for inclusion in foodstuffs to complement the Public Law 480 program.

Because of our long term involvement in the Public Law 480 program, we are concerned that recent substantial cuts in the program, if continued, will seriously undermine the ability of it to provide effective humanitarian assistance to the needy overseas. For example, the President's proposed budget, which you will be considering, proposes only 3 million metric tons of food aid in fiscal year 1998 compared with nearly 8 million metric tons of food aid as recently as 1993. Although we recognize that the 1993 level included large donations of surplus governmental stocks which are no longer available, these further proposed reductions in donations will have a substantial negative impact on the future viability of the program. We believe this concern has already manifested itself since private voluntary organizations are reducing or eliminating programs in many areas of the world due to these cutbacks.

We note the President's budget proposes an overall foreign aid increase of \$1.2 billion while cutting the Public Law 480 budget by more than \$120 million. The President's proposed Public Law 480 budget of \$990 million represents a cut of more

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than one-third from the program's fiscal year 1994 level of \$1.55 billion. Worldwide humanitarian food needs have not diminished to the extent suggested in the President's budget, and if the United States is to maintain its long-standing role as the world's leader in providing humanitarian food aid, our recent fall-off in support of assistance must be halted.

Title II of Public Law 480 is indeed the lifeblood of our humanitarian assistance program. We are pleased that the President's budget proposes maintaining Title II funding in fiscal year 1998 at current levels. However, even maintaining the status quo in Title II places this vital component of Public Law 480 at risk, especially in light of proposed cuts in the other titles which will continue to have a negative impact on programs under Title II. In light of these factors, we believe that an increase in Title II funding is justified and should be seriously considered by the Subcommittee.

Lastly, we do not agree to increasing the foreign aid budget while cutting humanitarian food assistance. We would hope that during your deliberations, the food aid budget, especially Title II, is adequately maintained, and hopefully increased, in order that this crucial assistance program can remain viable.

Thank you for your attention to this matter.

PREPARED STATEMENT OF MICHAEL CONNEALY, PRESIDENT AND CHIEF OPERATING OFFICER, RURAL COMMUNITY INSURANCE SERVICES

This statement is submitted on behalf of Rural Community Insurance Services ("RCIS") to provide the Senate Committee on Appropriations with RCIS' views on appropriations for the Federal crop insurance program for fiscal year 1998.

RCIS is a managing general insurance agency that, in 1996, sold and serviced approximately \$250 million of multiple peril crop insurance, approximately \$5 million of catastrophic coverage and approximately \$13 million of crop revenue coverage, pursuant to a Standard Reinsurance Agreement ("SRA") with the Risk Management Agency ("RMA"). RCIS is a wholly-owned subsidiary of Norwest Corporation, the bank holding company.

Norwest is one of the largest agriculture lenders in the United States with an agricultural loan portfolio of approximately \$1.28 billion. Whether Norwest lends money to a family farmer or to a business such as a seed, fertilizer or equipment dealer that, in turn, sells its products on credit to that family farmer, crop insurance is an essential link in the chain of credit on which our rural communities depend.

Because those communities and towns, their houses of worship, schools, hospitals, and businesses are heavily dependent on farm income, they are as much affected by uninsured natural disasters as are the farmers whose crops have been destroyed. Thus, to the extent that crop insurance increases the ability of our farm families to manage risk, crop insurance also strengthens the financial underpinnings of all rural communities which look to those farm families for their own livelihoods and future. Indeed, in the words of the Federal Crop Insurance Act, the very purpose of the "sound system of crop insurance" that Congress mandated is "to promote the national welfare by improving the economic stability of agriculture." 7 U.S.C. § 1502.

The schematic devised by Congress to foster "a sound system of crop insurance" and thereby "the economic stability of agriculture" is one of privatization and partnership. For example, in amending the Federal Crop Insurance Act in 1980, the Committee on Agriculture, House of Representatives, stated:

"In implementing the new crop insurance program. H.R. 4119 provides that reinsurance of private insurance companies willing to offer the all risk program shall be used to the "maximum extent practicable." This language reflects the Committee's desire to see maximum cooperation between the public and private sectors and ensure that the FCIC [Federal Crop Insurance Corporation] understands that it is to make a good faith effort to negotiate reinsurance arrangements. The Corporation should seek out private companies in all areas of the country which have the capability and desire to enter into a successful reinsurance arrangement.

* * * * *

"A serious effort must be made by FCIC to involve private industry in the Federal crop insurance program. The burden of negotiating an arrangement using reinsurance of private companies, to the maximum extent practicable, rests with FCIC, especially in view of the hiring limitation of 200 new personnel contained in H.R. 4119."

House Rept. No. 96-430, 96th Cong., 1st Sess., pp. 14-15.

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Subsequent amendments to the Act did not dilute or divert Congress' direction. Indeed, the 1994 Amendments extended the role of the private sector beyond reinsurance. For example, the 1994 Amendments directed the FCIC "to the maximum extent possible" to:

"Contract with private insurance companies, private rating bureaus, and other organizations as appropriate for actuarial, loss adjustment, and other services to avoid duplication by the Federal Government of services that are or may readily be available in the private sector and reimburse such companies for the administrative and program expenses as determined by the Board, incurred by them, under terms and provisions and rates of compensation consistent with those generally prevailing in the insurance industry * * * ."

7 U.S.C. § 1507(c)(2).

On January 15, 1997, Secretary Glickman pledged his support for the public-private partnership that Congress envisaged. In a speech before the National Press Club, Mr. Glickman said, in pertinent part:

"Our greatest challenge coming out of the new farm bill is to find new ways to help farmers thrive in an increasingly risky environment, and yet not be involved in the micromanagement of agricultural decisions. That is why risk management has become a top priority.

"Better risk management means many things: more and better market information; better access to information; producer education, and development and use of mechanisms to share or transfer risk. There is a role for a government-private sector partnership in helping producers use market information and in developing insurance products and other risk management products to deal with variabilities in agriculture."

Release No. 0008.97, p.4.

RCIS is aware of criticism that is currently being leveled at the multiple peril crop insurance industry. While some criticism may be warranted, much is not.

First, for example, in 1988, the FCIC contracted with Arthur Anderson & Co. to gather and analyze the costs incurred by private contractors in 1987 in the sale and service of multiple peril crop insurance and to compare those costs to the level of FCIC reimbursement, which was then 34 percent, plus additional reimbursements for excess loss adjustment costs. Specifically, Arthur Anderson was asked to determine:

"if the reimbursement rates are on the basis of costs to the same extent that such costs are covered by the FCIC and are consistent with terms and conditions and rates of compensation prevailing in the insurance industry * * * ."

Arthur Anderson & Co. "Review of Reimbursement Rates and Costs Incurred by the FCIC for the Federal Multiple-Peril Crop Insurance Program", September, 1989, p. 10.

Arthur Anderson found as here pertinent:

"The FCIC should make a determination regarding which of the contractors' costs are allowable for reimbursement and communicate the information to the contractors, preferably within the contractor agreements. We [Arthur Anderson] did not disallow any costs in our analysis as inconsistent with terms and conditions and rates of compensation prevailing in the insurance industry."

Id.

The FCIC took no action on Arthur Anderson's recommendations.

More recently, on May 11, 1993, RCIS urged the FCIC to identify and define the costs that were reasonable, allowable and allocable to expense reimbursement. In particular, RCIS suggested that the cost principles, Part 31, of the Federal Acquisition Regulation provided a ready made template for such an undertaking. Again the FCIC took no action.

In the absence of regulation prohibiting it from using its expense reimbursements to pay for expenses it lawfully incurred in the business of selling and servicing multiple peril crop insurance, RCIS incurred lawful expenses consistent with those prevailing in the insurance industry. And now RCIS is subject to criticism for doing those things that insurers and general agents do when no one, even after the Arthur

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Anderson report and RCIS' own proposal, told it not to do the things that insurers and general agents do.

Second, at a time when bad news is more fashionable than good, it is too easy to overlook the simple fact that the federal crop insurance program is a success. For example, in 1986, \$378 million of federally insured and reinsured crop insurance was in force; in 1996, that amount had grown to \$1.8 billion. In 1986, 60.8 million acres were insured; in 1996, 203.7 million acres were insured. And, while the program has expanded, the rate of expense reimbursement has contracted and an acre of coverage costs the Government less to deliver today than in 1986.

This success, in turn, has induced reinsured companies to invest in the future of the federal crop insurance program. RCIS, for example, has invested over \$8 million since 1995 in a business re-engineering project, Impact 1995, to develop a new personal computer and software system for its agents and loss adjusters and in new loss adjustment procedures that will permit RCIS to allocate its loss adjustment budget according to the indemnity dollars it disburses and not the number of claims forms it processes, as the FCIC procedures now require. RCIS is looking forward to the FCIC's prompt approval of this new claims process.

To maintain the momentum that Congress initiated with the Crop Insurance Reform Act of 1994, RCIS believes the following, minimal measures are needed.

First, the expense reimbursement for the sale and service of multiple peril crop insurance should be 28 percent with a reduction of no more than two percent on CRC and group risk plan insurance. A reduction below 28 percent will throw the multiple peril crop insurance program into uncharted waters. There is simply no way to predict the effect of a greater decrease on service to policyholders or future investment in the program. In this regard, in 1986, there were 39 reinsured companies selling, servicing and underwriting multiple peril crop insurance. Today, there are 16 companies. A reduction in expense reimbursement from 28 percent, the amount of reimbursement currently authorized by law, may reduce further the number of participants in the federal crop insurance program and have a particularly adverse effect on smaller companies. RCIS questions whether it is in the public interest to force smaller companies from this program and discourage new companies from entering.

A reduction in expense reimbursement below 28 percent will also limit, if not end, research and development of new risk management products as well as other long term investments. As expense reimbursements become more dear, the greater will be the need to retain all underwriting gain for reserves. Conversely, if the Committee were to appropriate 28 percent for expense reimbursement, the Committee may choose to earmark some amounts for long term investments such as computers, software and product development and require the refund of any earmarked funds that were not spent for their appropriated purpose.

Second, RCIS urges the Committee to restore appropriations to reimburse companies if they incur excess loss adjustment costs as defined by and provided for in the current Standard Reinsurance Agreement which states in Section IV. B.:

"In addition to the expense reimbursement in subsection IV.A., if the loss ratio on the Company's total book of business in any individual Fund in a state for the reinsurance year is in excess of one-hundred twenty-five percent (125 percent), FCIC will pay to the Company two hundredths of one percent (.02 percent) of the net book premium on all eligible multiple peril crop insurance contracts reinsured under this Agreement for that individual Fund in a state, for each full point in excess of the one-hundred twenty-five percent (125 percent) loss ratio. The excess loss adjustment expense reimbursement under this section will not exceed four percent (4 percent) of the net book premium in any individual Fund in a state for all eligible multiple peril crop insurance contracts reinsured under this Agreement. Group risk plan crop insurance contracts are specifically excluded from this computation."

The Committee had provided appropriations for such reimbursements in past years but apparently the language necessary to permit the FCIC to pay excess loss adjustment costs in the 1998 reinsurance year, which begins in the 1997 fiscal year, was unintentionally omitted from the 1997 fiscal year appropriations act. It is important that this language be restored. If loss ratios do exceed the above perimeters, the FCIC will not be required to disburse additional funds; however, if loss ratios are excessive, reinsured companies will not be able to adjust those excess losses without the compensation that the FCIC historically has paid and Congress has approved for such excess costs.

Finally, we question whether the Committee should provide appropriations for RMA's headquarters offices, its regional service offices, and its field compliance of-

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fices. Instead, RMA should comply with section 507(c)(2) of the Federal Crop Insurance Act which Congress enacted in 1009 but which RMA still has not employed. That section requires RMA “to the maximum extent possible” to:

“contract with private insurance companies, private rating bureaus, and other organizations as appropriate for actuarial, loss adjustment, and other services to avoid duplication by the Federal Government of services that are or may readily be available in the private sector, and reimburse such companies for the administrative and program expenses, as determined by the Board, incurred by them, under terms and provisions and rates of compensation consistent with those generally prevailing in the insurance industry * * * .”

RCIS does support an increase in RMA personnel at its Kansas City operations office to augment its actuarial capabilities.

RCIS and Norwest appreciate the opportunity to submit this statement for the Committee’s consideration.

PREPARED STATEMENT OF BRUCE C. CARLTON, EXECUTIVE DEAN OF AGRICULTURE AND NATURAL RESOURCES, ON BEHALF OF THE BLUEBERRY AND CRANBERRY RESEARCH AND EXTENSION STATION, RUTGERS UNIVERSITY

SUMMARY

The Rutgers Blueberry/Cranberry Research and Extension Center at Chatsworth, New Jersey is recognized as one of the finest research centers serving the national blueberry and cranberry industries. The research and outreach activities ongoing at Chatsworth have had, and continue to have, a profound impact on the blueberry and cranberry industries and the mostly small farmers who grow these crops. The station’s focus is on environmental and agricultural sustainability and on the “nutraceutical” (medicinal) properties of cranberries and blueberries, thus serving the broader public interest. The very modest federal investment in this research and outreach effectively leverages continuing state support, as well as significant industry support.

We seek your support for appropriating \$220,000 from the fiscal year 1998 USDA budget for the Rutgers Blueberry and Cranberry Research and Extension Station at Chatsworth to match the \$250,000 annual appropriation from the New Jersey legislature and the annual budgetary support from the New Jersey Agricultural Experiment Station.

This state and federal partnership we call the land-grant system is one of America’s proudest and most fruitful achievements. Through the dedicated, even inspired, use of federal base funds, this country’s land-grant institutions have established a base of knowledge and expertise that serves the immediate and long-term needs of our clientele in every state. We at Rutgers University have no higher priority than to support base funds distributed through the United States Department of Agriculture for agricultural research and cooperative extension services.

Mr. Chairman: The Rutgers Blueberry/Cranberry Research and Extension Center at Chatsworth, New Jersey was created in 1984 as a state initiative. Blueberries and cranberries are important crops for New Jersey (we rank first in the nation in fresh market blueberry production and third in cranberries), and the value of the Chatsworth Center to the state blueberry and cranberry industries has been and remains very high. As of about 1990, however, the scope and benefits of the station’s work began to extend beyond New Jersey.

The Rutgers Blueberry/Cranberry Research Station now ranks among the finest national research centers serving the national blueberry and cranberry industries. Indeed, growers from Washington, Wisconsin, Oregon, Michigan, and Massachusetts—and cooperative associations representing growers and distributors throughout the US and Canada—rely on this research and extension station to carry out research essential to the continued viability of their industry. Today the national blueberry crop is worth more than \$135 million each year, and it injects more than \$300 million into the national economy. The annual cranberry crop is worth some \$250–300 million and is estimated to contribute about \$1.8 billion to the U.S. economy.

We seek support for inclusion of \$220,000 in the fiscal year 1998 USDA budget for the Rutgers Blueberry and Cranberry Research and Extension Station at Chatsworth to match the \$250,000 annual appropriation from the New Jersey legislature and annual budgetary support from the New Jersey Agricultural Experiment Station.

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Federal support of blueberry and cranberry research apparently has been put on a "hit list" of so-called "corporate welfare" programs. In fact, it is nothing of the sort. Rather, this very modest appropriation serves as a model for federal research investments: it is essential to continued state support and helps leverage private research dollars far in excess of the federal appropriation. Moreover, the advances in breeding disease resistance and drought resistance have application far beyond these berry crops, as does groundbreaking work in identifying and understanding the specific medical and health benefits of certain compounds in these fruits.

If federal funding for the station is removed, research on development of berry varieties resistant to diseases and pests that account for the vast majority of fungicide and insecticides use would be terminated. Development of integrated pest management techniques for these crops also would end, as would research and development of biocontrol measures that would enhance the nationwide Integrated Pest Management effort.

Throughout its lifetime, the Rutgers Blueberry/Cranberry Research Station has been very productive. Besides developing many new varieties of blueberries and cranberries for the industry, this national research and extension center both generates and disseminates the results growers need to produce consistently reliable yields of high-quality berries. The project objectives are twofold: first, to develop pest management methods and disease-resistant varieties that will reduce losses to cranberry and blueberry crops from disease, insects, and climatic factors while minimizing the use of pesticides. This is particularly important in accommodating continued agricultural production near environmentally sensitive areas such as wetlands and the Pinelands where these crops must be grown. The second objective is to improve fruit quality and productivity through genetic enhancement of these crop species. Another important and extremely promising area of research is in the medicinal properties of cranberries and blueberries.

Among the Center's specific achievements:

- Researchers have succeeded in isolating the specific compound in cranberries that can prevent and cure urinary tract infections. Intellectual property issues are being resolved before a formal announcement of this achievement is made.
- In cooperation with USDA/Agricultural Research Service (ARS), the Center has released eight blueberry varieties since 1988, all of which are adapted for growing in New Jersey, Massachusetts, New York, Michigan, Arkansas, North Carolina, Oregon, and Washington.
- Work at the Center has resulted in increased genetic diversity in the blueberry and cranberry gene pool for both breeding and inbreeding lines; it houses the largest collection of blueberry and cranberry plants; and identification and evaluation of elite breeding lines for future release.
- Center scientists have successfully identified and characterized the causal agent and insect vector for a very destructive blueberry disease, Blueberry Scorch Virus; have identified major causal agents inciting cranberry fruit rot in New Jersey; and have identified potentially useful biological control organisms against cranberry fruit rot.
- Research has led to identification of a new destructive pest—mealybug—in blueberry and identification of potentially useful biological control organisms against cranberry and blueberry insect pests.

The Blueberry/Cranberry Research and Extension Center has an excellent record of productivity and achievement. Still, much remains to be done, particularly in the area of improving cranberry varieties. Successful cultivation of both these wetland crops depends upon pesticides to control a variety of major pests and diseases. IPM research is needed to reduce our reliance on these chemicals, as is the breeding of resistant varieties.

Let me emphasize that the small family farms/businesses that grow and manage both of these crops are doing what they can to support themselves. Modest federal funding for blueberry and cranberry research in no way qualifies as an undue federal subsidy for farmers or agribusiness.

Thank you for the opportunity to offer testimony on behalf of federal funding for the Rutgers Blueberry and Cranberry Research and Extension Center in Chatsworth. Please do not hesitate to contact me if I can provide further information or address any concerns you may have.

PREPARED STATEMENT OF RICHARD T. GUEST, PH.D., OFFICE OF IR-4, COOK COLLEGE/NEW JERSEY AGRICULTURAL EXPERIMENT STATION, RUTGERS UNIVERSITY

Mr. Chairman: Thank you for the opportunity to submit comments concerning the USDA's IR-4 Minor Crop Pest Management program.

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BACKGROUND

The IR-4 Project was organized in 1963 with the singular purpose of helping producers of minor crops obtain needed pesticide registrations in the absence of private sector support. The program has expanded over the years to address the needs of nurserymen in the \$10 billion "green" industry and to assist both public and private organizations obtain registrations for biologically based pest control products. IR-4 has developed a highly efficient research operation involving a network of field research centers and analytical laboratories which are managed by regional offices at four principal state land grant institutions and by the USDA-ARS minor use office at Beltsville, MD. Coordination of the overall IR-4 minor use program with EPA, USDA, user groups and private sector registrants is carried out by a headquarters operation located at the New Jersey Agricultural Experiment Station.

Although the importance of minor crops to the United States economy and to the diet of citizens of this nation is not new, the 1996 Food Quality Protection Act has again focused attention on the minor use issue. It is well recognized that "minor crop" is a serious misnomer in that the combined acreage of these crops in the U.S. exceeds 11 million acres with an annual value of more than \$32 billion. Indeed, the value of minor crops in 27 states exceeds 50 percent of the value of all crops grown in those states. For many states, such as California, Florida, Georgia, Hawaii, New Jersey, New York, North Carolina, Pennsylvania and Washington, minor crops make up a very significant portion of all crop sales.

Although the traditional mission of IR-4 has been to assist with the registration of renew pesticide products, the 1988 amendments to FIFRA resulted in the need for IR-4 to support minor use reregistrations that would not be supported by commercial registrants. Utilizing additional funds appropriated by Congress, IR-4 fulfilled its 1990 Strategic Plan commitment by supporting the reregistration of more than 600 existing minor crop registrations while continuing its ongoing pest management programs on food and ornamental crops and expanding its biopesticide registration program.

IMPACT OF FQPA

While FQPA amendments to FFDCA have eliminated the conflict caused by the Delaney clause, amendments to FIFRA will have a major affect on minor uses. On one hand, the Act contains provisions that will encourage private sector registrations for minor crops. On the other hand, there will be an increased need for residue data brought on by tolerance reassessment, the impact of aggregate exposure and increased costs to registrants for data required to maintain existing registrations. Because of the economics inherent to minor uses and with more than 500 minor crops currently grown in the U.S., it is clear that IR-4 will once again serve a critical role in developing data to support minor crop reregistrations and the registration of alternative pest management tactics.

IR-4 RESPONSE PLAN

The FQPA requires that all tolerances be reassessed over the next ten years (by 2006) according to current standards. The U.S. EPA has proposed a three year timetable to complete tolerance reassessment of the first group of pesticides which represent more than 3100 crop tolerances. With assistance from the USDA-CSREES Expert IPM Decision Support System database, IR-4 estimates that about 1700 pesticide registrations on minor crops are at risk as a result of this initial tolerance reassessment. Working with crop producers, registrants and EPA, IR-4 has initiated a program to estimate the effect of tolerance reassessment on minor crops by:

- identifying affected minor crop registrations
- surveying producers and state and federal agricultural scientists to determine needs
- contacting registrants to determine support/non-support decisions
- working with other USDA programs to identify alternatives
- identifying pest control gaps
- using workshop committees to establish priorities

Grower surveys have been initiated and industry support decisions will be evaluated as FQPA regulatory requirements are finalized. The evaluation of "at risk" minor crop registrations will culminate with an October IR-4 prioritization workshop at which producers, scientists and registrants will provide guidance to IR-4 on short and long term research and registration objectives.

Although research on reduced risk alternatives has already begun, this effort will be accelerated in 1998 based on workshop recommendations. The ongoing IR-4 re-

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search program will assure the continued availability of pest control products for minor crops through:

- cooperation with USDA, EPA, land grant scientists, producers and registrants to identify effective reduced risk alternatives for minor crops and assist in their registration
- coordination with EPA and registrants to develop GLP-compliant data to support tolerance reassessment on minor crops. This may require risk reduction tactics such as:
- consumer-based vs. farm gate-based residue information
- lowering existing tolerances by reducing rates and extending PHI's

Research on alternative pest control products and risk mitigation tactics will continue to be carried out mainly at IR-4's 19 field research centers and 16 analytical laboratories under Good Laboratory Practice Standards. The long term goal of this research is to develop data to support registrations for reduced risk alternatives for all minor crops.

MINOR USE DATA REVOLVING FUND

To ensure the adequacy of effective pest management on minor crops, the FQPA authorized the establishment of a Minor Use Pesticide Revolving Fund within USDA. Since the present mission of IR-4 is to provide product performance and residue chemistry data, funds available from the USDA grant program should be utilized to develop additional data required to support registrations and reregistrations. Such information may include one or more of the basic or core studies required by EPA for product registration as well as studies and surveys relating to pesticide usage, food consumption and dietary exposure which may be important to the evaluation of pesticides subject to tolerance reassessment and reregistration.

The IR-4 Project is a proven national agricultural research program and a significant data contributor to EPA. With additional resources, IR-4 can utilize its expertise and capabilities to assist with the evaluation and management of projects eligible for grants under the Minor Use Pesticide Data Revolving Fund by:

- interacting with EPA and registrants on data requirements
- preparing and reviewing research protocols
- providing or locating appropriate testing/analytical facilities
- preparing data packages for approval by registrants and EPA
- providing quality assurance inspections and audits

Further, IR-4 can provide assistance in coordinating with its existing minor use residue program to assure concurrent data development. And the IR-4 Quality Assurance program can provide guidance to insure that research data are in compliance with EPA Good Laboratory Practice Standards.

BIOPESTICIDE RESEARCH PROGRAM

IR-4's commitment to "safer" pest control began in 1982 with the adoption of its biopesticide initiative. Although relatively small in terms of dollars spent on research, there is growing interest in the IR-4 Biopesticides program on the part of state and federal researchers and venture-capital firms. As a result, the program has successfully attracted extramural funding to the point where research is supported nearly dollar for dollar with outside monies. This has permitted the Biopesticide program to make a number of significant contributions to minor crop pest management over the past several years, including the following registrations:

- methyl anthranilate, a natural ingredient, for bird repellency on blueberries, cherries and grapes
- codling moth granulosis virus for insect control on apples, pears, walnuts and plums
- Pseudomonas fluorescens* for bacterial disease control on mushrooms
- formic acid for control of tracheal mites on honey bees

As stated in the IR-4 Minor Crop Pest Control Strategy, it is the goal of IR-4 to increase intramural funding to about 50 percent of the total IR-4 budget to support research on biologically based and reduced risk pest control products on minor crops.

PROGRAM FUNDING

Many sources of funding contribute to the support of the IR-4 Project. These include direct funding from USDA, commodity producers and commercial registrants and non-monetary support from state and federal research institutions. In fiscal year 1997, \$8.3M in federal funds supported the operation of IR-4 including \$5.7M from CSREES Special Research Grants, \$2.1M from ARS and \$0.5M in Hatch Funds. Direct support from the private sector typically totals \$0.5M annually. Fund-

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ing to IR-4 is highly leveraged by host institutions from a variety of sources including technical and administrative assistance, laboratories and other research facilities, equipment and land. It is estimated that for each federal dollar directed in support of IR-4, three dollars are contributed by host research institutions.

Although no overhead is charged against IR-4 grant funds, real dollars available for research have been reduced by several factors. A recent survey among IR-4 co-operators showed that compliance with Good Laboratory Practice Standards consumes 36 percent of IR-4 research dollars. Moreover, EPA mandated geographic data requirements have increased the cost of field trials by 60 percent and inflation has further eroded research monies. Although IR-4 program accounting show an increase in analytical productivity along with a decrease in analytical costs, there is evidence of a decline in overall program productivity as a result of level funding since 1994.

USDA-CSREES has requested an increase of \$5M in funding in the Special Research Grant line entitled Minor Crop Pest Management, IR-4 for fiscal year 1998. This will increase the overall federal support for the minor use program to \$13.3M. The additional funding will be used to support registrations for reduced risk pest management alternatives for minor crops and to support risk reduction tactics for current registrations where effective alternatives are presently unavailable.

Thank you for this opportunity to testify on behalf of the IR-4 minor use program. We are grateful to the Committee for its past support of the IR-4 Project and look forward to a favorable response to the current USDA-CSREES funding request.

PREPARED STATEMENT OF BRUCE C. CARLTON, EXECUTIVE DEAN OF AGRICULTURE
AND NATURAL RESOURCES, RUTGERS UNIVERSITY

SUMMARY

With a combination of federal and state funds, Rutgers University has completed Phase 1 construction of Walter E. Foran Hall, a remarkable facility which has had a dramatic impact on the quality of teaching, research, and outreach in the plant sciences, agricultural biotechnology, and natural products chemistry programs at Rutgers. The university needs to complete Phase 2 construction of Foran Hall, and so currently seeks \$3.5 million from the USDA fiscal year 1998 budget as the final federal match needed for the Foran Hall project. We ask your support for this appropriation.

Mr. Chairman: Thank you for this opportunity to submit comments.

This state and federal partnership we call the land-grant system is one of America's proudest and most fruitful achievements. Through the dedicated, even inspired, use of federal base funds, this country's land-grant institutions have established a base of knowledge and expertise that serves the immediate and long-term needs of our clientele in every state. We at Rutgers University have no higher priority than to support base funds distributed through the United States Department of Agriculture for agricultural research and Cooperative Extension services.

While adequate base funding is critical, targeted funding also can yield important benefits. With a combination of federal and state funds, Rutgers University has completed Phase 1 construction of Walter E. Foran Hall, a remarkable facility which has had a dramatic impact on the quality of teaching, research, and outreach in the plant sciences, agricultural biotechnology, and natural products chemistry programs at Rutgers. The university needs to complete Phase 2 construction of Foran Hall, and so currently seeks \$3.5 million from the USDA fiscal year 1998 budget as the final federal match needed for the Foran Hall project. We ask your support for this appropriation.

As is documented briefly in this testimony, the Plant Science and Biotechnology Complex already has resulted in significant discoveries and public benefits related to plant sciences, agricultural biotechnology, and natural products chemistry. Research to be pursued in the Phase 2 wing will serve key state and regional priorities, as well as these USDA-identified national goals:

- increase partnering among scientists and policy centers
- introduce new and value-added products
- leverage public resources to attract private investment and support economic development
- recruit and educate more women and underrepresented minorities in the sciences
- optimize health by improving the nutritional quality of foods
- achieve sustainable agriculture production systems
- protect, conserve, and improve water, soil, and air resources

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—expand and apply new technologies to distance education

The purpose of Walter E. Foran Hall is to support agriculture. The building is used for teaching, research, and Extension that benefit agriculture in New Jersey and in the United States. During the last 10 years, the Committee on Appropriations has appropriated \$10 million for Phase 1 construction, and approximately \$7.47 million toward Phase 2 construction. Mr. Chairman, we are extremely grateful for this committee's strong vote of confidence in supporting the complex thus far.

Phase 1 of the project was completed at an overall cost of \$37.2 million. Of that total, Congress appropriated \$10 million, and \$27.2 million came from the State of New Jersey and Rutgers University. In addition, Rutgers has invested another \$10 million in such ancillary, but necessary, facilities as greenhouses and containment facilities for transgenic plants.

Phase 2 of the project consists of building a wing to the existing structure, which originally called for a \$10 million federal investment, of which approximately \$7.47 million has been appropriated by Congress since fiscal year 1994. The amount actually received by Rutgers University for Phase 2 is about \$7.24 million, as USDA retains a 3 percent administrative allowance. Since 1993, when the project was originally budgeted, construction costs have risen, and the Phase 2 budget now stands at \$10.64 million, or \$3.4 million more than Rutgers has received.

For fiscal year 1998, therefore, we request that Congress authorize and appropriate \$3.5 million, which, minus the 3 percent USDA allowance, will provide the \$3.4 million required by Rutgers to complete the Plant Science and Biotechnology Complex. To repeat, this is the final federal match required to complete construction of the Phase 2 wing of the complex, thus completing the federal share of the entire project.

Through an unfortunate error last year, the Appropriations Conference Committee received incorrect information that resulted in a substantial reduction in the fiscal year 1997 appropriation for Phase 2, which was to have been the final appropriation for this project. We are aware that the fiscal year 1997 Appropriations Act Conference Report contained language suggesting that no additional federal funds would be available for facilities. It is our fervent hope, however, that additional funds will be made available that would otherwise in all likelihood have been made available last year, had the confusion not occurred.

Completing the Phase 2 wing will allow for total consolidation of the Plant Science and Plant Pathology departments and will provide additional, much-needed instruction facilities, including a computer laboratory that will double as a distance-learning facility, thus serving an important regional and national need. Primary areas of focus in the Phase 2 wing include new-use agriculture and natural products chemistry, two areas of increasing strength at Rutgers. We are focusing on these areas because of their importance to New Jersey agriculture and other key industries, and because they require the kind of team-based, interdisciplinary approach that is becoming a hallmark of New Jersey's State University. The Phase 2 wing also will enable the University to expand on its technology development and transfer to commercial partners, and cultivate the development of new global markets.

The finished portion of Foran Hall contains state-of-the art research laboratories, conference and classroom facilities, an outstanding science library, and attached greenhouses. The facility is home to our departments of Plant Science and Plant Pathology, our Center for Agricultural Molecular Biology (the AgBiotech Center), and our Center for Turfgrass Science.

Foran Hall has already influenced the status and quality of plant science, agricultural biotechnology, and student life on the Cook College and Douglass College campuses of Rutgers University. Because the facility stands adjacent to a residential building for Douglass College women who are part of the intensive math and science program there, it inspires and serves those students, simultaneously advancing Rutgers' overall effort to increase the representation of women in the natural sciences.

In addition:

—The AgBiotech Center has quickened its pace of research disclosure and patent applications. In the past two years alone, fourteen disclosures and eight patent applications have been filed on discoveries ranging from disease resistance in plants and antiviral plant proteins to phytoremediation technologies, that is, using plants to clean up radioactive materials and heavy metals from soils and water. For New Jersey agriculture, phytoremediation holds promise for new, high-demand, high-value crops and offers potential for converting or returning cleaned soils to production agriculture and other uses that support economic development.

—The AgBiotech Center recently made international news, when research on methyl salicylate and airborne signaling in plants was the cover story in the

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prestigious British science journal *Nature*. This is only one of several research projects having similar impact.

—Turfgrass research was strong before moving into Foran Hall, but the move afforded new opportunities for closer interaction with colleagues from other disciplines. Those interactions are leading to new advances in improving disease resistance and drought resistance in plant varieties, which in turn reduces use of pesticides and water by agriculturists and homeowners alike.

—Last summer, plant scientists in Foran Hall announced that the saponin found naturally in asparagus can inhibit the growth of human leukemia cells. Other research is identifying which natural component of cranberries can prevent or cure infections of the urinary tract. Discoveries like these add to the momentum of our initiatives in natural-products chemistry, nutraceuticals, and new-use agriculture.

These are manifestations of the phenomenon documented in a recent national report, and reported on in a recent *New York Times* article (attached) titled “Study Finds Public Science is Pillar of Industry.”

Work ongoing in Foran Hall has leveraged significant external, competitive funding. In AgBiotech alone, external funding generated by only seven research teams increased in fiscal year 1997 to more than \$2.8 million from federal, industry, and foundation sources.

Students, too, make good use of the facility: undergraduates flock to take advantage of the biotechnology curriculum and research opportunities in faculty laboratories. The computer terminals in Foran Hall’s Chang Science Library are in use late into the night.

Perhaps the most profound impact the facility has had is its affect on the way that academic departments interact, leading to more and better collaboration, and better preparation for students. Foran Hall combines conventional agricultural research with biotechnology at a high level, and both kinds of researchers profit from the interaction. Foran Hall is proof that problems formerly believed to be virtually insurmountable can be solved more readily when addressed by an interdisciplinary team of scientists. Consequently, the results of scientific breakthroughs can be delivered to the public more quickly than in the past.

Although population pressure and high costs challenge many in production agriculture around the nation, New Jersey, as the most densely populated and the most urban state, has experienced these challenges sooner and more intensely. In many ways, New Jersey is a microcosm of contemporary global issues, and our ability to address them effectively as they relate to agriculture is extraordinarily important within and beyond the Garden State. Completing Foran Hall will substantially improve our capacity to do just that.

Thank you for your consideration. We are most grateful to this committee for its pivotal support in bringing our Plant Science and Biotechnology Complex to fruition. The complex underpins our philosophy that we must integrate developing technologies with traditional approaches to ensure that modern American agriculture is as productive and competitive as it needs to be in the global economy.

Please do not hesitate to contact me if you require additional information.

PREPARED STATEMENT OF THE SOCIETY OF AMERICAN FLORISTS

The Society of American Florists (SAF) appreciates the opportunity to submit testimony on the important topic of federal spending for American agriculture. Our testimony will address four specific areas within the USDA budget: research funding, pesticide clearance and research, international trade and quarantine protection, and collection of statistical information.

The Society of American Florists (SAF) is the national trade association representing the entire floriculture industry. We are a vertically integrated organization, representing all segments of the industry: growers, wholesalers, retailers, importers, suppliers, educators, and related organizations. Our membership includes about 20,000 small businesses, located in every state and Congressional district nationwide.

Even in this era of reduced federal spending, it is a great time to be testifying on behalf of our industry. Floriculture and nursery crops are becoming an increasingly important part of agriculture, and their economic role in rural communities across America is increasing every year. Congress noted that increased importance last year by including in the fiscal year 1997 budget research money specifically targeted to our industry. We were very pleased with that first-ever recognition of our industry.

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We hope to build on that foundation. The Society of American Florists and the American Association of Nurserymen have begun an exciting and important new initiative. We have joined together to develop a proposal for the establishment of a coordinated research initiative for our industry.

Unfortunately, in its 1998 budget proposal, the Clinton Administration has failed to include a continuation of the research dollars targeted to our industry by Congress last year. In our testimony today, we request the Committee restore that funding, which serves as a foundation for the research initiative for our industry that we are now preparing and which we will also describe to you.

INTRODUCTION: THE FLORICULTURE AND NURSERY INDUSTRY

The combined products of the floriculture and nursery industry include cut flowers and foliage, potted flowering and foliage plants, bedding plants, perennials, annuals and bulbs, shrubs, trees, cut Christmas trees, and seeds and other propagative material. Together, our industry is also known as "environmental horticulture."

In 1994, according to USDA statistics, environmental horticulture crops were estimated to be \$10.04 billion in farm-gate cash receipts and to represent more than 10 percent of all U.S. crop cash receipts. Yet less than one percent of federal research dollars is devoted directly to this industry's research. Floriculture and nursery crops are the third largest farm crop, ranking ahead of all others except corn and soybeans. Combined environmental horticulture production now ranks in the top five agricultural commodities in 26 states, in the top ten commodities in 43 states, and in the top 20 in all states. The environmental horticulture segment continues to be one of the fastest growing areas of agriculture, growing between 5 and 8 percent annually.

Among the various agriculture sectors, environmental horticulture is a major employer, and very labor intensive, given the diversity of crops produced. For example, nursery growers are conservatively estimated to employ at least 43,000 persons on a full-time basis year-round, and 102,000 during seasonal peak periods. At the retail and landscape level, there are estimated to be more than 600,000 full-time, part-time and seasonal workers employed in the nursery industry, and another 350,000 in floriculture.

Yet, although recognition of the importance of the industry is increasing, few federal research dollars are dedicated to the floriculture and nursery industry. Current competitive grant programs and other public funding mechanisms are unable to meet the industry's research needs. The industry supports, and will continue to support, research efforts through its own privately funded research foundations. However, the Federal government needs to play an appropriate role in research which cannot be undertaken by the private sector.

I. RESEARCH FUNDING

For fiscal year 1997, Congress directed \$200,000 to the Agricultural Research Service to address the research needs of the floriculture and nursery industry. We are extremely to note that in its 1998 budget, the Clinton Administration has failed to include a continuation of even that amount of direct research money. The 1998 budget request includes a \$10 million net increase for ARS research programs. We are supportive of that increased funding for agriculture research. However, the Administration has redirected a total of \$23 million from ongoing research projects, apparently including that targeted last year to our industry. We thus request that Congress continue to direct specific funding to the USDA to undertake new research initiatives in support of the research needs of the floriculture and nursery industry.

We also draw the Committee's attention to our current effort of preparing a detailed research initiative for the floriculture and nursery industry. That research initiative can only be built by continuing into fiscal year 1998 the foundation so wisely authored by this Committee, and enacted by Congress, last year.

The following is a preview of the floriculture and nursery initiative which we are currently developing. The initiative's goals clearly show the importance to society at large of directing research funding to our industry. The goals of the floriculture and nursery initiative are to:

- Protect the environment, including human health and safety, through research leading to reduced use of chemicals and to reduced runoff and other wastes.
- Maintain biodiversity through germplasm preservation, so that useful botanic traits may be transmitted to future generations.
- Enhance environmental remediation and clean-up efforts on wetlands, post-industrial sites, air quality, and other environmental areas through research on the ability of plants to reverse and mitigate environmental pollution.

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- Improve rural and suburban economies across the United States by providing improved crop production systems and technologies to greenhouse and nursery growers and by helping them to increase production efficiency.
- Contribute to the U.S. agricultural economy and to increased international competitiveness by conducting research leading to improved greenhouse and nursery products and production strategies, and by improving technology transfer of research results to benefit other sectors of U.S. agriculture.
- Improve Americans' quality of life through increased availability and diversity of plants and flowers for the consumer.

The joint research initiative will accomplish these goals by focusing research on three essential areas: (1) Improved environmental and resource management; (2) Improved pest management; and (3) Improved production system practices and strategies.

We specifically note here, as well, that our proposed initiative also includes funding for the establishment of a germplasm center at the Ohio State University, in conjunction with the USDA National Plant Germplasm System. We have reviewed, and specifically endorse, that request to you by Ohio State University and incorporate it as a part of our initiative.

The floriculture and nursery industry has an exemplary record of supporting its own research needs. Industry-funded grants for research to benefit the industry total several million dollars each year. The industry has a long record of commitment to supporting its own research needs, and is prepared to continue to do so. However, Federal support is also necessary. Federal support can provide greater depth, increased duration, and better long-term coordination of research efforts.

Accountability is an important consideration in all research efforts, and nowhere more so than when Federal tax dollars are involved. The floriculture and nursery research initiative will be formulated with the joint input of industry, academic and government researchers. The proposed research program will rely upon that continued, joint input to ensure that research projects remain relevant to the needs of the industry.

Currently, the ability of the US industry to compete effectively in the world marketplace is hampered. The opportunity for research piloted by our industry, which could be of inestimable benefit to U.S. agriculture, is in danger of being lost. Local communities and businesses are missing economic opportunities. Environmental improvements which will benefit all Americans are needed. Increased federal research funding for the environmental horticulture industry will return benefits not only to the industry itself, but also to the nation's environment, to other segments of agriculture, to rural and suburban economies across the country, to our international competitiveness, and to our quality of life. We urge you to continue your support of research funding for our industry.

II. PESTICIDE CLEARANCE AND RESEARCH

SAF very strongly supports the Administration's budget request of \$10.7 million for the Interregional Research Project No. 4 (IR-4), as well as monies for related pesticide registration, clearance, and training activities. The IR-4 program is extremely important to our industry, and we are most pleased that the Administration has requested additional funding for this program for the coming year. The loss of crop protection chemicals for the "minor crops" is one of the most serious problems facing agriculture today. The IR-4 program, which helps in obtaining registration data required by EPA for minor use chemicals and biological pest control agents, is of critical importance. In 1996, IR-4 helped to support some 891 registrations for ornamentals. Since 1977, the program has assisted with over 3,600 plant ornamental label expansions.

SAF also urges Congress to direct additional, specifically targeted funding into USDA research into methyl bromide alternatives. We further urge Congress to direct USDA to continue to work with the Crop Protection Coalition, of which SAF is a member, in determining how these critical research funds are used. Methyl bromide is a widely used fumigant and a necessary component of many crop management and crop quarantine systems. Its use will be banned in this country by January 1, 2001. It is imperative that effective alternatives to methyl bromide be identified.

III. INTERNATIONAL TRADE AND QUARANTINE PROTECTION

Animal and Plant Health Inspection Service (APHIS)

SAF strongly supports adequate funding to ensure that APHIS performs its vital mission of safeguarding domestic plant resources from exotic pests and diseases. Our entire industry—and indeed, all of American agriculture—depends upon

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APHIS' continued ability to perform and improve its mission. We would oppose any diminution in APHIS' resources that might impair its ability to protect U.S. agriculture against the introduction of foreign pests and diseases.

Trade is becoming increasingly international, and a strong effort is underway to encourage freer trade across borders. In light of this trend, it is imperative that APHIS increase and strengthen its role in ensuring the protection of U.S. agriculture from foreign pests and diseases. Our industry, like other segments of U.S. agriculture, simply cannot otherwise survive. If biological risk cannot be protected against and controlled, then limits must be placed on the importation of plants and floral products into this country.

APHIS plant pest emergency fund

SAF supports an appropriation designated for APHIS to establish, a "no-year" emergency agricultural fund that could be accessed at the sole discretion of the Secretary of Agriculture in the event of pest or disease emergencies. Such a fund must be adequate to deal with multiple emergencies and must be replenished regularly.

When a potentially devastating pest is discovered in the U.S., it is very clear that the Department of Agriculture must be able to act swiftly and decisively. Emergencies, like the Karnal bunt, in wheat, or the Mediterranean fruit fly, require very rapid response and adequate resources. The costs of eradication are far outweighed by the benefits of success—yet success depends upon ability to respond quickly.

Chrysanthemum white rust

SAF urges that Congress direct APHIS to continue to fund and to conduct cooperatively, with any affected state, thorough survey and eradication programs for chrysanthemum white rust in fiscal year 1998.

Chrysanthemums are the top-selling potted flowering plant sold year-round in the U.S., and chrysanthemums—as cut flowers, potted plants and garden plants—are an important economic contributor to both the nursery and greenhouse industries. Chrysanthemum white rust, a serious disease of chrysanthemums, is not indigenous to the United States, and can only occur here when brought in from foreign sources. Until now, USDA and the states, in cooperation with our industry, have kept the disease eradicated in this country.

However, there is great concern throughout our industry that given continued budgetary pressures, APHIS might not be able to continue this fight. Without a strong commitment from APHIS, the disease might become established—resulting in loss of export markets and severe economic losses for U.S. growers.

IV. COLLECTION OF STATISTICAL INFORMATION

National Agricultural Statistics Service (NASS)

We strongly support the Administration's proposed budget for the Census of Agriculture, to be conducted in 1998, and further urge that Congress specifically direct NASS to assure funding of the Horticulture Census as a part of the Census of Agriculture. The Census of Agriculture, and the related Horticulture Census, are extremely important to our industry. The statistics provided by these efforts are not available from any other source, nor could any entity other than the federal government successfully produce such statistics.

CONCLUSION

In closing, we are mindful of the budget constraints faced by this Committee. Yet we believe that federal funding of the kinds of activities supported in our testimony is not only justified, but necessary, if U.S. agriculture is to continue to survive in the world marketplace. We look forward to continuing to work with the Committee, and with the Department of Agriculture, on behalf of our industry as an important part of American agriculture.

PREPARED STATEMENT OF THE SOCIETY FOR ANIMAL PROTECTIVE LEGISLATION

\$12 MILLION IS DESPERATELY NEEDED BY APHIS' ANIMAL CARE PROGRAM FOR ENFORCEMENT OF THE ANIMAL WELFARE ACT

The Animal Welfare Act, passed in 1966 and amended in 1970, 1976, 1985 and 1990, is intended to ensure the protection of animals used in exhibition, the commercial pet trade, experimentation and during transportation. The responsibilities of USDA-APHIS' Animal Care Program for enforcing the Act have increased greatly over time and the number of facilities which must be inspected by Animal Care field

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staff have increased too. Meantime, the budget provided for the program has fallen below the fiscal year 1993 level.

Nationwide, more than a million animals are covered by the law's standards for basic care and treatment. USDA inspectors visit the following sites to ensure compliance with the Act, including provision of food, water, housing and veterinary attention:

<i>Type of facility</i>	<i>Number of sites</i>
Dealers (breeders, random source suppliers, brokers, and operators of auctions)	4,265
Exhibitors (zoos, circuses and carnivals)	2,453
Research facilities (hospitals, universities, pharmaceutical companies and private firms)	2,506
Intermediate Carriers (airlines and railroads)	725
Intermediate handlers (service between consignor and carrier)	417
 Total sites inspected by USDA inspectors	 10,366

A sufficient field force is essential to widespread compliance with the Animal Welfare Act. At least 100 field inspectors are needed to do the job given to USDA by Congress. Sadly, the number of inspectors has been decreasing over time from a peak of 86 inspectors in fiscal year 1993.

Now, there are only 72 field inspectors responsible for making compliance inspections at the more than 10,000 separate sites across the country. Severe budgetary constraints preclude an adequate number of inspectors to make the necessary inspections. The Animal Care Program is falling further and further behind in meeting its responsibilities as expenses increase, but the budget doesn't.

Following are the monies provided by Congress over the past five years:

[In millions of dollars]

<i>Fiscal year</i>	<i>Amount</i>
1993	9.188
1994	9.262
1995	9.262
1996	9.185
1997	9.185

Each year of level funding results in a loss of approximately 4 members of the Animal Care staff. The program cannot sustain such continued losses.

There are two money saving changes which should be made in the existing Animal Care Program. The first is to eliminate the Preceptor Program. The Preceptor Program costs \$10,000 per year and provides training to only 2 or 3 inspectors. The Veterinary Medical Officers spend up to 6 weeks, away from their jobs, visiting a number of different research facilities. There are a number of less costly means to educate the veterinary inspectors including the use of videotapes, and it would be far more beneficial to provide training, with USDA oversight, to all. With the serious shortage of field inspectors, the loss of 2 or 3 inspectors for 6 weeks is an additional problem.

The other cost saving change which could be made in the Animal Care Program would be the elimination of Random Source (USDA Licensed Class B) dealers who supply dogs and cats to research. Report language could offer support to H.R. 594, The Pet Safety and Protection Act, sponsored by Agriculture Committee Members Congressman Charles Canady and Congressman George Brown. As you can see from the attached report on hearings held this past summer, the legislation would greatly reduce USDA's regulatory burden, while still allowing research to continue unhindered.

Because of their failure to obey the law, Class B dealers require an inordinate amount of time and resources to regulate, needing four times as many inspections under the Act as other licensees and registrants. USDA has cited countless record violations by these dealers making it virtually impossible to determine which animals may be stolen or fraudulently acquired pets.

AN APPROPRIATION OF AT LEAST \$900 THOUSAND IS NEEDED FOR THE ANIMAL WELFARE INFORMATION CENTER

The Animal Welfare Information Center operates out of the National Agricultural Library in Beltsville, Maryland. It has received level funding of \$750 thousand since its creation over ten years ago. In addition, approximately half of the funds that are intended for the Center have been used for other purposes by the National Agricultural Library. Therefore, the Center requires appropriations of at least \$900 thou-

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sand or a line item appropriation of at least \$750 thousand and report language preventing the use of these funds for other purposes.

The Animal Welfare Information Center is an extremely valuable and essential resource for scientists, veterinarians, caretakers and administrators involved in the care and use of animals for research purposes. The Center provides information on methods which could (1) minimize the pain and distress caused animals including the use of anesthetics and analgesics and (2) reduce or replace the use of animals in experiments. The Center helps to prevent unintended duplication of experiments on animals and assists with employee training.

The Animal Welfare Act requires principal investigators to consider “* * * alternatives to any procedure likely to produce pain to or distress in an experimental animal.” A January 1995 audit by the Office of the Inspector General identified a failure of principal investigators to meet this requirement. Of 36 research protocols reviewed by OIG at 9 research facilities, 12 “did not contain a written narrative description of the methods and sources used to determine that alternatives to the procedures were not available.” This is the type of data that AWIC is suited to assist the investigator in compiling. The staff at the Center is able to conduct the necessary literature searches and instruct the investigators how to do database searches on their own.

Over the past 8 years the Animal Welfare Information Center’s small, but efficient, devoted staff have answered more than 12,000 requests (principally questions about research protocols), responded to 20,000 requests for publications, distributed over one-quarter of a million AWIC publications (these are not copyrighted, so have likely been photocopied and disseminated further), conducted thousands of workshops and educated tens of thousands of people through exhibitions at conferences and presentations.

Lack of sufficient funds has prevented the Center from continuing its program of printing many publications (such as information on providing enrichment to animals and on research refinements), often done as collaborative projects. Additional funds would permit creation of an educational electronic interactive module and permit development of a training class for all members of Institutional Animal Care and Use Committees to ensure compliance with their responsibilities under the Animal Welfare Act.

THE HORSE PROTECTION ACT IS IN NEED OF \$500 THOUSAND FOR ENFORCEMENT PURPOSES

The Horse Protection Act (HPA), enacted in 1970, prohibits the cruel practice known as “soring”. Soring is act of causing pain to the limbs of horses, usually by application of chemical or mechanical agents, to produce an exaggerated gait. Tennessee Walking Horses are the common victims. Managers of horse shows are required to disqualify any horse that has been sored.

A 1976 amendment to the HPA established a program of inspection utilizing Designated Qualified Persons (DQP’s) to assist APHIS’s veterinary inspectors, who were not able to attend the vast majority of horse shows to check for compliance with the HPA. DQP’s are trained and licensed by APHIS-certified Horse Industry Organizations to detect sored horses.

Unfortunately, the turndown rate is significantly lower when DQP’s are checking horses without the presence of APHIS veterinary inspectors. In fiscal year 1995, DQP’s turned down .95 percent of the horses they inspected, but with the presence of APHIS inspectors, 2.48 percent were turned down, a dramatic difference.

There are more than 500 horse shows per year which must be monitored and nearly 100,000 horses which need to be examined. APHIS was only present for 50 shows. Additional resources are needed to permit APHIS inspectors to attend more shows, ensuring significantly stronger compliance with the HPA.

In fiscal year 1995 money was appropriated for thermography equipment to assist in detecting sore horses. Using these devices, USDA inspectors look for abnormal heat indications to detect apparent soreness. Additional monies are needed to permit training of personnel in the use of thermography as a key enforcement tool. This equipment should be used widely since it appears to assist with compliance efforts—both through accurate, scientific determination of sore horses as well as by serving as a powerful deterrent against would-be violators of the HPA.

THE ANIMAL DAMAGE CONTROL PROGRAM SHOULD BE FOCUSING ON EFFECTIVE, PUBLICLY ACCEPTABLE, NON-LETHAL METHODS

The Animal Damage Control Program (ADC) should be making a transition to publicly acceptable non-lethal methods and away from reliance on publicly unacceptable methods such as steel jaw traps, necksnare and other painful, indiscriminate

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lethal devices. ADC's research program should be increasing its attention towards alternative methods, too, to insure an adequate supply of wildlife control tools that will be accepted and permitted by the general public.

This Fall, ballot initiatives were adopted in Colorado and Massachusetts which prohibit use of leghold traps, necksnares and other devices. A public opinion poll conducted by Caravan Research in November of 1996 reveals that 74 percent of Americans want the leghold trap to be banned.

Meantime, ADC possesses 30,000 leghold traps for use in its control operations. These relics of the past should be melted down. The program should switch to any of an array of alternative traps which greatly reduce the suffering of the animals. Herewith the testimony is *Alternative Traps: The Role of Spring Powered Killing Traps in Modern Trapping, The Role of Cage and Box Traps in Modern Trapping, and The Role of Legsnare in Modern Trapping*, which describes the various devices which are available.

This past year ADC set enormous leghold traps with teeth for use in capturing wolves outside of Yellowstone National Park. While attempting to catch a mother wolf, her pup was caught by mistake. The following is a report on his condition after the incident:

July 11—" * * * foot severely swollen from corpus down, puncture wound with pus flowing out at distal carpus, severe bruising and soft tissue trauma."

July 14—" * * * still not eating."

July 15—" * * * swelling still pronounced * * * more necrotic tissue present."

July 16—"Still not eating."

July 17—"Much tissue loss and self mutilation of toes (gone). Foot dead. Foot should be removed or wolf put down."

July 18—" * * * food not eaten."

July 19—"Removed left front leg."

As noted, his leg had to be amputated to save his life. He will spend the rest of his life at a wildlife center in Minnesota. Use of extremely painful steel jaw traps is unnecessary; legsnare can be used to catch wolves with much less suffering. In addition, ADC has developed sensors which emit a signal when a trap is sprung to allow the trapped animal to be removed from the device far more rapidly. Traps sensors and tranquilizer tabs, already developed by ADC, need to be utilized in the field as much as possible.

LETTER FROM DR. SHELBY F. THAMES, DISTINGUISHED UNIVERSITY RESEARCH PROFESSOR, PROFESSOR OF POLYMER SCIENCE, UNIVERSITY OF SOUTHERN MISSISSIPPI

UNIVERSITY OF SOUTHERN MISSISSIPPI,
Hattiesburg, MS, May 13, 1997.

Hon. THAD COCHRAN,
Committee on Appropriations, Subcommittee on Agriculture, Rural Development, and Related Agencies, Washington, DC.

DEAR SENATOR COCHRAN: I am writing once again to seek your continued support for the Mississippi Polymer Institute funding in the fiscal year 1998 Agriculture Appropriations legislation. I have also taken the liberty of enclosing a copy of the testimony I submitted to your Subcommittee for inclusion into the written hearing record.

Senator, as you know, the Mississippi Legislature in 1983 authorized the Polymer Institute at The University of Southern Mississippi to work closely with emerging industries and other existing polymer-related industries to assist with research, problem solving, and commercializing efforts. From this modest beginning, the mission of the Polymer Institute also included in its mission the commercialization and expanded use of alternative agriculture crops. As you know, we have approached the commercialization mission via developing new polymeric products from agricultural derived crops.

The support, leadership, and guidance you have given to these efforts has allowed the University to turn the dream of a multi-dimensional center for polymer related research into a reality. Today, the Mississippi Polymer Institute is staffed to capacity and it continues to address national as well as state and regional needs. I have included a number of our new commercialization research efforts in my testimony which confirm and validate our original concept for the Center. These efforts also point to the very real need for continued support for the Center and its people. We have developed a number of products that are currently being reviewed by industrial firms for potential commercialization. In fact, one firm has provided patent attorneys and the funds for preparing and submitting five patent applications. These

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applications are now pending in the patent office and they all focus on a novel use of agricultural based crops.

Our efforts are certainly maturing and the support you have made possible is responsible for whatever success we might enjoy. We have accumulated a very fine staff of mature scientists who appreciate our commercialization objectives and, thus, are able to be very productive. I am confident that the investment you have made on our behalf is paying dividends and I want to accelerate this productivity if at all possible. For instance, one of the developments under patent application includes a concept whereby latex coatings can be prepared without the use of organic solvents! This is made possible via a novel agricultural product. Its potential for generating funds for the University is significant, however, it needs additional research before proceeding to commercialization. The concept by which it functions is novel and will require that we educate the potential user to its full benefits. This will mean that we must have a "technical service" arm of our team to provide necessary information and assistance to potential users of the technology. Clearly there is no better group to service this technology than its founders, i.e., our group. A similar issue exists with another of our patent application discoveries dealing with multi-functional coating additives. Indeed, this technology must mature and we should be the ones seeing to its maturity.

For this reason, I have requested \$1.2 million for fiscal year 1998 to support the Institute. These funds will support the ongoing commercialization efforts and the "technical servicer type efforts needed to commercialize our recent technology developments. These are really exciting times for our group and I look forward to your next visit so that I can share these developments with you first hand.

While I know you face many difficult budget decisions this year, I do believe we are producing high quality commercialization efforts, and the enthusiastic involvement of industry confirms our potential for a significant return on investment. I truly hope that you can continue to support our efforts as you have in the past. I hope you realize that we will work tirelessly to insure that your faith in our abilities has not been misplaced.

Again, thank you for your support and for your leadership in the Senate. The good people in Mississippi have indeed been fortunate to have you representing us.

With warm personal regards,

Very truly yours,

SHELBY F. THAMES.

Enclosure.

PREPARED STATEMENT OF DR. SHELBY F. THAMES

Mr. Chairman, distinguished members of the Subcommittee, I would like to thank you for this opportunity to provide testimony to you concerning the ongoing efforts of the University of Southern Mississippi (USM) and the Mississippi Polymer Institute. I would also like to repeat my expression of gratitude to the Subcommittee for its many years of leadership and support of the Institute and its work. This testimony will include an update on the progress of the Institute since my testimony of approximately one year ago. During the past year, I have focused on the development of products that have potential of near term commercialization, and I am pleased to tell you that I believe 1997 will see the commercialization of at least one of our technologies.

In 1983, the Mississippi Legislature authorized the Polymer Institute at USM to work closely with emerging industries and other existing polymer-related industries to assist with research, problem-solving, and commercializing efforts. The Institute provides industry and government with applied or focused research, development support, and other commercializing assistance. This effort complements existing strong ties with industry and government involving exchange of information and improved employment opportunities for USM graduates. Most importantly, through basic and applied research coupled with developmental and commercializing efforts of the Institute, the Department of Polymer Science continues to address national needs of high priority.

A major goal of my work is in pursuit of commercializing the use of alternative agricultural crops. This approach offers an array of opportunities for agriculture as the polymer industry is the largest chemical products industry in the world, and heretofore has been highly dependent upon petroleum utilization. However, my efforts are directed to the development of agricultural derived materials that can improve our nation's environment, and reduce our dependence on imported petroleum. As farm products meet the industrial needs of American society, rural America is the benefactor. Heretofore this movement to utilize alternative agricultural products

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as industrial raw materials has received some attention but much less than the opportunities warrant. Your decisions are crucial to the accomplishment of these goals as funding from this Subcommittee has enabled us to implement and maintain an active group of university-based polymer scientists whose energies are devoted to commercializing alternative crops. We are most grateful to you for this support and ask for your continued commitment.

The faculty, the University, and the State of Mississippi are strongly supportive of the Mississippi Polymer Institute and its close ties with industry. Most faculty maintain at least one industrial contract as an important part of extramural research efforts.

Polymers, which include fibers, plastics, composites, coatings, adhesives, inks, and elastomers, play a key role in the materials industry. They are used in a wide range of industries including textiles, aerospace, automotive, packaging, construction, medical prosthesis, and health care. In the aerospace and automotive applications, reduced weight and high strength make them increasingly important as fuel savers. Their non-metallic character and design potentials support their use for many national defense purposes. Moreover, select polymers are possible substitutes for so-called strategic materials, some of which come from potentially unreliable sources.

As a polymer scientist, I am intrigued by the vast opportunities offered by American agriculture. As a professor, however, I am disappointed that few of our science and business students receive training in the polymer-agricultural discipline as it offers enormous potential.

I became involved in the polymer field 33 years ago, and since that time have watched its evolution where almost each new product utilization offered the opportunity for many more. Although polymer science as a discipline has experienced expansion and a degree of public acceptance, alternative agricultural materials are an under-utilized national treasure for the polymer industry. Moreover, there is less acceptance of petroleum derived materials today than ever before and consequently the timing is ideal for agricultural materials to make significant inroads as environmentally friendly, biodegradable, and renewable raw materials. These agricultural materials have always been available for our use, yet society, for many reasons, has not recognized their potential. I would like to share with you several examples to support this tenet:

- A natural product has been identified, and transformed into a polymerizable monomer to be included in emulsion polymers. The utility of this natural product allows the synthesis of emulsion polymers that perform their intended uses at room temperature and without the use of organic solvents. Thus, we have developed a truly no volatile organic content (VOC) coating. Most coatings of this type contain between 375 to 500 grams of VOC/gallon. It is expected that this monomer will be offered for sale in the last quarter of 1997 or the first quarter of 1998.
- A waterborne, water proofer has been designed and formulated with the help of several natural products. The material functions as a water proofer yet is carried in water. However, after application to the intended substrate, typically wood or cementous products, the material becomes hydrophobic and highly water resistant. We have collected one and one-half years of exposure data on this product with excellent success. It will be available on the retail market in 1997 via Southern Chemical Formulators of Mobile, AL.
- We have designed, synthesized, and formulated a SOLVENTLESS emulsion coating. The novel technology used in this synthesis has been expanded to a wide variety of polymeric types and thus this technology should have wide application in the emulsion or latex coatings market. The significant advantage of this technology is the ability to produce a high performance, waterborne coating using only water as the carrier medium. Thus, essentially a solventless coating has been discovered and synthesized that performs as well or better than traditional latex products. This finding represents a significant discovery in polymer design and is successful only because a significant portion of this technology involves the use of an agricultural crop. Negotiations are currently underway with a raw material manufacturer who will synthesize and market the novel polymer forming raw material. Four patent applications have been prepared and filed on this and allied technology.
- A new, multifunctional polymer additive has been designed, synthesized, and tested. It is a highly efficient, multifaceted additive that functions as a dispersant, a defoamer, an adhesion promoter, a gloss enhancer, and corrosion inhibiting species. It is derived from an agricultural raw material and is very novel in its performance and applications. A patent has been prepared and submitted to the patent office.

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- We are exploiting the potential of lesquerella, a crop that produces a triglyceride similar to castor oil. Several products have been prepared and include: polyesters, stains, foams, pressure sensitive adhesives, and 100 percent solid ultraviolet (UV) coatings. In fact, the latter technology, UV cured coatings, was highlighted at the most recent AARC/NASDA meeting in Washington, DC.
- Novel open cell foams have been designed and prepared from lesquerella and/or castor oil. They are of high quality and can substitute for foams used extensively in industrial settings. In fact, scientists from the Department of the Army (Natick, MA) are performing biodegradability on castor and lesquerella based foams prepared and submitted by the Thames' Research Group.
- During the most recent six months, novel closed cell lesquerella foams have been prepared from lesquerella derivatives and will be submitted for testing. This commercialization focus is attractive as castor foams are prepared from imported oil, i.e., at an annual \$50–75 million import cost. Thus, emergence of a lesquerella oil industry has the potential to reduce U.S. imports.

It is clear that commercial utilization of agricultural products is needed. However, we simply must devote more support and effort to this rewarding undertaking.

U.S. agriculture has made the transition from the farm fields to the kitchen tables, but America's industrial community has been frightfully slow in adopting ag based industrial materials. Let us aggressively pursue this opportunity and in doing so:

- Intensify U.S. efforts to commercialize alternative crops.
- Reduce U.S. reliance on imported petroleum.
- Maintain a healthy and prosperous farm economy.
- Foster new cooperative opportunities between American farmers and American industry.

Mr. Chairman, your leadership and support are deeply appreciated by the entire University of Southern Mississippi community. While I can greatly appreciate the difficult financial restraints facing your Subcommittee this fiscal year, I feel confident that further support of the Mississippi Polymer Institute will continue dividends of increasing commercialization opportunities of agricultural materials in American industry. Advances in polymer research are crucial to food, transportation, housing, and defense industries. We have sampled and established the value of ag products as industrial raw materials, and I believe it is time to move to another level of investigation with these efforts. Therefore, we respectfully request \$1.2 million in federal funding to exploit the potentials of commercializing alternative agricultural materials and to continue our initiatives. Thank you Mr. Chairman and Members of the Subcommittee for your support and consideration.

PREPARED STATEMENT OF DR. ROBERT C. ALBIN, INTERIM DEAN, COLLEGE OF AGRICULTURAL SCIENCES AND NATURAL RESOURCES, TEXAS TECH UNIVERSITY

SUMMARY

Specific action requested of the committee.—It is requested that Congress appropriate \$1.2M for a collaborative research initiative with Texas Tech University through the Institute for Research in Plant Stress. The overall Plant Stress and Water Conservation research program has received level funding for the past seven years at \$1.675 million annually. It is critical that the research programs of the collaborating University and USDA-ARS scientists, which will continue to focus on understanding the genetic control of plant mechanisms that facilitate drought and heat tolerance in crop plants, move forward to coincide with the expected construction completion date of January, 1999, for the new laboratory.

Justification.—The formal plant stress and water conservation research program was initiated in 1979 after 20 years of feasibility studies and planning by agencies of the federal government. Of major significance is the Congressional action for fiscal year 1997 that awarded fob funding of \$8.1M to complete construction of the \$13.6M research laboratory. Groundbreaking for the laboratory is expected to be late July, 1997. The federal government through USDA/ARS, and the State of Texas through Texas Tech University and the Texas Agricultural Experiment Station, have put in place over the last 17 years a comprehensive-integrated program in which 18 senior scientists are today working to develop improved crop plants and planting systems that will provide for economically optimal crop production under variable, extreme environmental conditions. Scientists with expertise in the broad areas of genetics, breeding and molecular biology; biochemistry and physiology; and climatology, soil science and systems research have research programs poised for the challenges of the predicted climatic changes forecast within the next several dec-

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ades. This research program will be greatly enhanced with the completion of construction of the laboratory on the Texas Tech campus and through funding for a collaborative research initiative with faculty scientists in the Institute for Research in Plant Stress at Texas Tech University and USDA-ARS scientists. This research initiative will provide the impetus for the continuing, collaborative discovery and transfer of technology from laboratory molecular technologies to field applications of genetically modified plants exhibiting improved stress tolerance.

INTRODUCTION

The background setting for the problem which the research program addresses is found in Senate Document 59, the feasibility study conducted by the Science and Education Administration of USDA in 1977, and the statement of Texas Tech University submitted for the record before this committee on March 26, 1979. We will not repeat this information, as the record is replete with scientific and economic documentation prepared by a select committee which describes the conditions of the region and the research required to seek viable solutions to a complex set of critical problems confronting the areas of agriculture, natural resource conservation and environmental protection. The need for a comprehensive, multidisciplinary, long-term basic science research program is obvious. Texas Tech University has taken the lead in the development of a cooperative research program with the USDA/ARS and the Texas Agricultural Experiment Station. As Congressional funding increases for the requested collaborative research initiative, colleges, universities, and federal laboratories throughout the Great Plains, agricultural producers, the agribusiness industry, and private research organizations will become participants in this critical, far-reaching research program.

This collaborative research initiative will provide the impetus to allow the University and USDA-ARS cooperating scientists to move their research programs forward to coincide with completion of construction of the new laboratory. The collaborative research effort will continue to focus on understanding the genetic control of plant mechanisms which facilitate drought and heat tolerance in crop plants. This vital research is encompassed in the comprehensive nationwide research mission of the U.S. Department of Agriculture/ARS, and the research program implements the recommendations of the original Plant Stress and Soil Water Conservation feasibility study prepared by the USDA/ARS.

BACKGROUND

Key planning events involving Texas Tech University have taken place in conjunction with the development of the research program and laboratory. Preliminary discussions with officials of the U.S. Department of Agriculture and members of Congress were held in 1975. Initial funds for construction of the research laboratory were appropriated in 1978 in the amount of \$0.8M. Varying amounts of funds for construction were appropriated over the years with \$8.1M appropriated for fiscal year 1997 to complete the required funding of \$13.6M to initiate construction of the laboratory; groundbreaking is expected to begin in late July, 1997; and construction completion is expected to be January, 1999. The 18 senior scientists working in the research program and all participants in the valiant effort are elated with this Congressional action.

Funding for the research program was initiated in 1980 at \$0.2M. Congressional funding for the research program reached \$1.675M in fiscal year 1991 and has remained constant at this level to date.

RESEARCH MISSION AND ACTIVITY TO DATE

The mission of the Plant Stress and Water Conservation Research Program is to develop a detailed understanding of how plants survive and grow when exposed to extreme temperatures and limited moisture. This knowledge is used to develop improved varieties and crop production systems for cotton, wheat, sorghum and forage crops that insure greater water use efficiency, improved drought tolerance and increased winter hardiness. This research is critical to the future success of the agricultural industry of the Great Plains region of the central U.S. where environmental extremes cause millions of dollars of losses in crop production each year. Reduction of these annual losses would stabilize the economy of this region while improving the ability of the American farmer to compete in domestic and export markets for agricultural commodities. The Plant Stress and Water Conservation Research Program has concentrated in three specific areas: Stress Physiology; Genetic Enhancement; and Advanced Production Systems.

Stress physiology.—The specific objective of research in stress physiology is to identify and understand the structural and biochemical mechanisms in higher

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plants that could mediate the impact of environmental extremes. These studies have concentrated on the evaluation of those weed and crop species which grow in the driest deserts and coldest regions of our planet. Scientists have isolated specific morphological modifications, enzymes and proteins that drastically reduce the damage caused to plants exposed to environmental stress. Only recently have the first of the hundreds of genes available from these exotic species been fully characterized.

Genetic enhancement.—Plant physiologists work cooperatively with molecular biologists to isolate the specific DNA sequences needed to synthesize the unique proteins and enzymes that reduce environmental stress. The plant stress DNA sequences are combined with other regions of DNA that regulate gene expression to insure that the selected stress genes are “turned on only when the crop plants are exposed to specific environmental conditions. These carefully designed plant stress genes are then introduced into bacterial cells to generate the millions of additional copies needed for incorporation into a crop plant.

Cell biologists have developed several innovative techniques to introduce these genes into individual cells or intact plants of cotton and alfalfa. Only in a small proportion of the cells exposed to the plant stress genes will the introduced DNA be incorporated into the original DNA of the crop species resulting in a transformed plant. Scientists worldwide are still working on similar techniques to allow transformation in wheat and sorghum.

Plant breeders and molecular biologists have only recently begun to select among thousands of transgenic plants for appropriate expression of the introduced genes. Only after extensive and carefully controlled evaluation under laboratory conditions are transformed plants evaluated under field conditions.

Agronomists are evaluating the impact of row orientation, row spacing/plant populations, nitrogen fertilization and water management to optimize economic yields under both dryland and irrigated conditions. These cultural practices have a drastic impact on the efficiency of critical physiological processes such as photosynthesis, nitrogen metabolism and carbon metabolism as well as soil water and crop canopy temperature relationships. Optimization of the soils and crop production environment is essential to ensuring economic crop production.

POTENTIAL ECONOMIC IMPACT

Insuring that the U.S. farmer is economically competitive in both domestic and export markets is essential to the future of American agriculture. Use of genetically enhanced varieties and advanced production systems to improve the efficiency of producing major crop commodities has the potential to revolutionize American agriculture. These technologies are beginning to be applied in specific production regions worldwide to improve the efficiency and stability of crop production. Any country or geographic region not participating fully in this revolution will become increasingly less efficient and less competitive in both domestic and international agricultural markets. If the agricultural industry of the Great Plains is to survive in this highly competitive global environment, it is essential that the U.S. move ahead in the application of leading edge science to this industry. The success of the Plant Stress and Water Conservation Research Program will allow future generations of American farmers to efficiently produce crops for food during extremely cold winters or hot, dry summers and in direct competition for international crop commodity markets.

PREPARED STATEMENT OF DOUGLAS H. FENDER, EXECUTIVE DIRECTOR, TURFGRASS PRODUCERS INTERNATIONAL

Mr. Chairman and Members of the Subcommittee: On behalf of Turfgrass Producers International (TPI), I appreciate this opportunity to provide the Subcommittee with the turfgrass industry's perspective in support of restoration of the \$55,000 appropriation for the National Turfgrass Evaluation Program (NTEP) deleted in the President's fiscal year 1998 budget request for the Agricultural Research Service (ARS). TPI also requests that the Subcommittee appropriate an adequate amount to fund a full-time ARS turfgrass scientist position.

Turfgrass Producers International (TPI) is a 30-year-old, not-for-profit association of turfgrass sod producers with members in all 50 states, Canada and 34 additional countries. TPI represents over 650 turfgrass sod farm operations that produce approximately 80 percent of the acreage sold each year in the U.S. The 1992 U.S. Census of Agriculture reported sod sales to be in excess of \$471,640,000. TPI represents its members on federal issues of importance, and adequate funding of the National Turfgrass Evaluation Program is an issue of significant concern to this organization's members.

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The National Turfgrass Evaluation Program (NTEP) has been unique in that it provides a working partnership that links the federal government, turfgrass industry and land grant universities together in their common interest of turfgrass cultivar development, improvement, and evaluation. The National Turfgrass Evaluation Program is the primary means by which cultivated varieties of turfgrass are evaluated in this country. It provides unbiased information on turfgrass cultivar adaptations, disease and insect resistance, and environmental stress tolerance. The public and private sectors of the turfgrass industry use this information to develop cultivar recommendations for home owners, sod producers, sports turf managers and golf course superintendents.

At a time when this nation's awareness of environmental considerations is increasing, and because of the multiple benefits provided by turfgrass, as well as the advancements that are being made to further improve them through integrated pest management programs, recycling, and other means, the USDA has before it a unique opportunity to take positive action in support of the turfgrass industry, and similarly enjoy a tremendous return for what must be considered, in relative terms within USDA's budget, a minuscule investment of Department funds.

While the vast majority of the Department's funds have been and will continue to be directed toward traditional "food and fiber" segments of U.S. agriculture, it is important to note that turfgrass sod production is clearly defined as agriculture in the recently-passed Farm Bill and by many other Departments and Agencies. Further, it is estimated by the ERS that the turfgrass industry, in all its forms, is a \$30-35 billion industry and that, despite recessions of the early 1980's and 1990's, grower cash receipts for floriculture and environmental horticulture crops continued to increase. According to the ERS, cash receipts reached \$8.7 billion in 1991. It should also be noted that the turfgrass industry is the fastest growing segment of U.S. agriculture, while it receives essentially no federal support. There are no subsidy programs for turfgrass nor are any desired.

For the past 70 years, the USDA's support for the turfgrass industry has been modest at best. The turfgrass industry's rapid growth, importance to our urban environments, and impact on our daily lives warrant more commitment and support from the USDA. A full-time turfgrass scientist position, funded at a minimum of \$350,000 per year, is needed to address critical research needs and to provide liaison with the turfgrass industry. A scientist in this position will be able to address USDA programmatic needs relating to priorities in genetic resources and biodiversity, as well as address important aspects relating to integrated pest management. This USDA scientist would also provide scientific oversight to the NTEP program.

Failing to support the National Turfgrass Evaluation Program would be considered by TPI to be a tremendous oversight of a major opportunity. USDA's support of the NTEP at the \$55,000 level does not cover all costs. The NTEP will continue to rely most heavily on industry support. However, it is essential that the USDA maintain its financial support and that a commitment be made to support a turfgrass scientist position to work closely with NTEP. The turfgrass industry relies heavily on NTEP for unbiased findings. Discontinuing this support would eliminate a highly reliable and credible level of objectivity that is associated with the NTEP program.

The members of Turfgrass Producers International respectfully request that the Subcommittee restore this vital \$55,000 appropriation for the National Turfgrass Evaluation Program (NTEP), and that an ARS turfgrass scientist position be funded to work with the NTEP.

Thank you very much.

PREPARED STATEMENT OF THE U.S. AGRICULTURAL EXPORT DEVELOPMENT COUNCIL

U.S. agricultural exporters want to compete on a level playing field. However, the large amount of foreign government manipulation of markets and production means U.S. agricultural exporters need Washington's support to make this happen. The record shows that U.S. agriculture is serious enough about this public-private partnership to contribute significant amounts of its own resources to the effort.

Further, U.S. agriculture and the U.S. Department of Agriculture (USDA) are using strategic planning, program evaluation, quantifiable goals, and a competitive award process to ensure that taxpayer's money is being used in a way which generates the biggest returns for the U.S. economy and its 1.2 million citizens who depend on a healthy agricultural export sector for their livelihood.

The U.S. Agricultural Export Development Council (USAEDC) respectfully urges this subcommittee to fully support all USDA export promotion efforts in the fiscal year 1998 budget, especially the FMD program at a level of \$30 million, and an

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MAP program at \$90 million. We also urge the subcommittee to support a strong USDA Foreign Agricultural Service (FAS), our partner in promoting increased U.S. agricultural exports.

First and foremost, it is important to revisit the role agricultural exports play in the health of our national economy and the well being of our citizenry. Every \$1 billion in agricultural exports supports approximately 20,000 U.S. direct and indirect jobs. With our \$60 billion in agricultural exports in 1996, this means a successful U.S. agriculture export effort was responsible for 1.2 million jobs. According to the U.S. Department of Agriculture Foreign Agricultural Service (FAS), Iowa has the second largest number of agricultural export related jobs at 96,000. Agricultural exports play an important role in every region of the country, including the South (189,000 jobs), the Pacific Northwest (67,000 jobs), and the Northeast (24,300 jobs). These jobs not only ensure family incomes, but help grow the national tax base and thus increase revenue to the Treasury, contributing to the reduction of our national debt. It is clear that without a healthy agricultural export sector, we all lose.

Ensuring the long-term vitality of U.S. agricultural exports is the reason the U.S. Agricultural Export Development Council (USAEDC) exists. We are a national, non-profit, private sector trade association funded solely by our members. Our nearly 80 members are U.S. farmer cooperatives and agricultural trade associations who in turn represent the interests of farmers and agribusinesses in every state of the Union. Our members represent producers of both bulk and high-value processed products, including grains, fruits and vegetables, cotton, livestock, dairy products, seeds, fish, wood products, wine, poultry, nuts, and rendered products among others.

Our members continually strive to ensure the United States remains one of the most active agricultural exporting countries in the world. We proudly produce among the world's highest quality products as evidenced by our ability to be one of the few sectors of the U.S. economy to consistently run a positive balance of trade. In 1996, U.S. agriculture racked up a record year in exports: \$60 billion in sales to more than 40 countries.

THE WORLD AGRICULTURAL PLAYING FIELD IS TILTED AGAINST U.S. EXPORTERS

Unfortunately, record exports do not tell the whole story. U.S. agriculture has done well, but international conditions are increasingly competitive. Foreign governments are bolstering agricultural production, putting the United States at a competitive disadvantage in foreign markets. With the demise of the Cold War, more and more countries have turned their attention to increasing support for agricultural production for both their domestic and export markets. Through their spending and production decisions, foreign governments have strengthened traditional, and created new, competitors for U.S. exports. For example, the European Union (EU)—our biggest competitor in world markets—in 1995 allocated over \$9 billion to expand their agricultural exports, far outstripping U.S. efforts. Over \$300,000 of this total was used for programs very similar to the FMD program and the MAP—triple the U.S. budget outlay for these programs.¹ U.S. exporters have lost export sales to unfairly under-priced EU agricultural products.

U.S. exporters are also encountering a rapid increase in the proliferation of new non-tariff barriers to agricultural products. With the Uruguay Round's move to reduce tariffs, many countries have turned to sanitary and phytosanitary requirements as barriers to market entry of U.S. agricultural products. Although said by their proponents to be objective, many of these sanitary and phytosanitary barriers are in actuality an attempt to use scientific data (or lack thereof) to establish import regimes which effectively halt or severely restrict U.S. imports. The recent EU uproar concerning U.S. genetically modified corn and soybeans is a perfect example.

A myriad of other types of non-tariff barriers exist. FAS and its overseas offices have gathered plentiful information on the numerous cases of foreign assistance for agricultural production as well as barriers to trade which prevent U.S. agriculture from reaching the exports levels of which it is capable. The National Trade Estimate of the Office of the U.S. Trade Representative catalogues this loss to U.S. agricultural exports from unfair foreign competition. Despite a significant commitment of their own resources, the U.S. private sector cannot overcome such an extensive amount of barriers alone.

A U.S. PUBLIC-PRIVATE PARTNERSHIP IS NECESSARY AND APPROPRIATE

Given the magnitude of the task, it would be impossible to expect either the U.S. private sector or the U.S. public sector to be able to remedy the unfair competition

¹ See attachment 1, taken from "The Competition in 1996," USDA Foreign Agricultural Service, November 18, 1996, p.5.

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which U.S. agriculture faces overseas on their own. In the past, U.S. agriculture has worked successfully with the U.S. Government to remedy foreign unfair competition and market access barriers which have prevented U.S. exports from fulfilling their potential. To those who say there is no appropriate role for Washington in this fight, former U.S. Under Secretary of Commerce Jeffrey Garten, now dean of the Yale School of Management, sums up the situation quite well: "In the best of worlds, governments ought to get out of this business [of export promotion] altogether. But the marketplace is corrupted by the presence of government. So do you sit on the side and pontificate about Adam Smith, or do you enter the fray?"² Mr. Garten argues that Washington must enter into the battle or risk losing U.S. jobs.

In the fiscal year 1998 Federal Budget, USDA proposes funding a number of programs for U.S. agriculture which help the sector overcome these foreign trade barriers and market distortions. USAEDC commends the actions of this subcommittee in the past to fund these programs. We strongly support efforts by this Congress and the Administration, as provided for in the fiscal year 1998 Federal Budget, to again provide a dynamic arsenal of programs to boost the efforts of U.S. agricultural producers to maintain current, and establish new, markets around the world.

The Federal Agricultural Improvement and Reform Act of 1996 (the 1996 Farm Bill) re-authorized and refocused a number of important export-related programs to help achieve the specific U.S. agricultural export goals contained in the Act itself. It is essential that the full range of USDA's export programs be fully funded and aggressively implemented this coming year, including the Foreign Market Development (FMD) program and the Market Access Program (MAP).

Nowhere is the record of success of the public-private partnership move evident than in the FMD and MAP programs. USAEDC members consider these programs the "heavy artillery" in the USDA arsenal. These complementary programs have been instrumental in our record export performance. The Foreign Market Development Program is aimed at long-term marketing efforts, i.e., making infrastructural changes to foreign markets through training and educational efforts among members of the foreign trade. Successful efforts result in a modification of the foreign market structure so that U.S. products become an available, attractive, well understood alternative to other sources of competing products. FMD activities help the foreign importer, processor, and retailer to understand not only how to properly store, handle, process, and market the U.S. product, but also to appreciate its unique characteristics, high quality, and reliability of supply.

The FMD program helps create new markets for U.S. agricultural exports. For example, as a result of FMD-funded market development efforts by the U.S. Beef Breeds Council and the American Shorthorn Association—one of their seventeen U.S. partner associations contributing their own resources to this program—150 head of U.S. breeding beef cattle departed last December for China. This was the first-ever shipment of U.S. purebred cattle breeders to China. Now that an agreement has been reached between Washington and Beijing on a health regulation protocol, further purchases are expected. A Chinese buying team has already made inspections and selections for a second shipment to be completed within the first half of 1997. Without the FMD program, the Council does not believe they would have had the opportunity or resources to establish this new market for U.S. cattle. With the sustained effort of the U.S. cattle industry and the FMD program, China could become a multi-million dollar market for U.S. cattle exporters in the near future.

The FMD program helps expand existing markets. In January of this year, the American Forest & Paper Association (AF&PA) succeeded in having the Government of Japan accept U.S. grade stamps for softwood lumber, a major non-tariff barrier to U.S. value-added wood products exports to Japan. AF&PA and the Western Wood Products Association—one of AF&PA's four U.S. partner associations contributing their own resources to this program—have been able to work with the Japanese for almost ten years on this issue. As the number one export market for U.S. wood products, Japan is currently a billion dollar market for the U.S. wood products industry and is expected to expand further with this major development. Without it, U.S. exports would have been lost to the Canadian wood industry which has already had its grade marks accepted by Japan. FMD resources, combined with those of the U.S. wood products industry, made this U.S. export expansion possible.

The Market Access Program (MAP) is the complement to the FMD program. Where the FMD program is aimed at long-term market infrastructural change, MAP targets more immediate, shorter-term market opportunities. MAP funds are often used for consumer promotion efforts to create or capitalize on new trends in foreign consumption. Activities tend to be targeted at the foreign consumer, increasing their awareness and level of comfort with the imported U.S. product. Consumer pro-

²"Don't Be Salesmen", *The Economist*, Jan. 2, 1997.

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motions have taken the form of in-store promotions, contests, advertising, and cooking demonstrations to name but a few. Numerous examples of both successful FMD and MAP programs are contained in the attached pamphlet, "A Working Partnership Builds Markets Abroad, Creates U.S. Jobs." which catalogues USAEDC member successes with both programs.

Therefore, USAEDC strongly supports an fiscal year 1998 FMD funding level of \$30 million. This amount does not grow the program, but keeps it at a level U.S. agriculture feels is necessary to support meaningful export promotion. It is consistent with recent funding levels of the program following years of program budget reductions. In addition, USAEDC strongly supports an fiscal year 1998 MAP funding level of \$90 million.

It is important to realize that the program participants put up their own money to participate in these programs. As such contributions are part of the rules of both the FMD and MAP programs, no one is getting a "free ride." Program participants are required to contribute their own cash and manpower to run these programs. Thus, the program participants have just as much, if not more, impetus to conduct responsible and effective FMD and MAP marketing programs. For example, in fiscal year 1995 (the most recent date available), USDA reports that U.S. program participants contributed over \$60 million of their own funds to match the \$92 million in MAP funds expended. Thus, U.S. agriculture contributed 65 cents for every MAP program dollar used. The FMD ratio is even higher, with U.S. agriculture contributing \$1.12 for every FMD program dollar used in fiscal year 1996. These numbers clearly illustrate the private sector's strong belief that the FMD and MAP programs are essential, and that the public-private partnership approach is effective.

U.S. agriculture is also active on other fronts to maximize opportunities for export increases, e.g., our public-private partnership with Washington extends into the trade policy arena. U.S. trade policy efforts have met with success in opening new markets to U.S. agricultural products. We are encouraged that the Administration appears set to continue this effort, as evidenced by U.S. Trade Representative Charlene Barshefsky's comments to the House Appropriations Commerce, Justice, State Subcommittee March 14, 1997, indicating that increasing U.S. agricultural exports will be one of her top priorities.³ However, trade policy alone is not enough. Bringing down barriers to trade is only truly effective at increasing U.S. agricultural exports when followed by intensive marketing efforts. The FMD and MAP programs help U.S. agriculture do just that.

FINE TUNING OF THE FMD AND MAP PROGRAMS HAS ENHANCED EFFECTIVENESS

USAEDC members are as concerned as anyone else in America about the federal budget deficit and the long-term fiscal health of this country. The public-private partnership in the FMD and MAP programs allows us to do something about it, namely increase U.S. agricultural exports beyond that which U.S. agricultural interests would be able to do on their own. USDA's own evaluation efforts indicate that for every federal dollar spent on agricultural export promotion, \$16 worth of exports are generated. In addition, USDA program rules require all program participants to conduct independent annual evaluations to determine the past impact and future direction of their marketing programs. This evaluation is in addition to that conducted independently by many of the associations themselves as part of their own strategic planning. Program evaluations are reviewed jointly by USDA and program participants to determine the appropriate promotional programs for particular markets in the future. These evaluations are evidence that USDA and program participants are serious about getting the best possible return on FMD and MAP funds.

Both generic and branded promotion have a place in marketing U.S. agricultural products abroad. Depending on the type of product and foreign market involved, branded promotion can be more effective than generic promotion as a way to increase U.S. farmers' exports. In fiscal year 1997, 100 percent of FMD funds and more than 70 percent of MAP funds were awarded for generic marketing efforts overseas. More than 80 percent of MAP branded marketing funds went to U.S. farmer cooperatives and small agribusinesses which met the Small Business Administration's definition of a "small business." In accordance with recent program reforms, in fiscal year 1998 only farmer cooperatives and small businesses will be eligible to receive MAP branded promotion funds. Additionally, all applicants—whether large or small, non-profit or corporate, for FMD or MAP programs—must go through a rigorous competitive award process for program funds. Recent program

³"China Dominates Barshefsky Hearing," Annie Tin, Congressional Quarterly Daily Monitor, March 17, 1997, on-line service.

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reforms have resulted in application and allocation criteria being much more widely known and transparent for all potential applicants.

USDA has also made other changes to the FMD and MAP programs over the past several years in response to General Accounting Office and Office of Management and Budget recommendations to ensure the best possible return to the U.S. taxpayer and the U.S. Treasury. Changes also reflect public comment on various proposed changes published in the Federal Register. These changes include: per the Government Performance and Results Act, changes to evaluation procedures and demonstrations of additional sales as a result of the programs; a reduction in paperwork requirements; the addition of an appeal procedure for compliance findings; and the expediting of routine administrative issues by delegating approval authority to lower levels within FAS. FAS is to be commended for its work in implementing these changes as well as its continuing efforts to support efforts by U.S. agriculture to expand our exports. A continued strong and well-funded FAS is an important part of our successful public-private partnership.

The U.S. Agricultural Export Development Council (USAEDC) appreciates this opportunity to submit written testimony in support of an aggressive U.S. effort in fiscal year 1998 to increase U.S. agricultural exports, specifically with an FMD program funded at \$30 million, and an MAP program funded at \$90 million.

ATTACHMENT 1

TABLE 1.—COMPETITORS' 1996 EXPENDITURES ON AGRICULTURAL EXPORT MARKET PROMOTION¹ AND EXPORT SUBSIDIES²

[In millions of U.S. dollars]

	Government appropriation	Producer/industry levies	Total expenditures
European Union	9,000.0		9,000.0
Denmark	2.7	24.4	27.1
France	35.4	44.2	79.6
Germany		34.7	34.7
Greece	9.5	2.3	11.8
Ireland	21.2	11.2	32.4
Italy	17.9		17.9
Netherlands	5.4	73.4	78.8
Spain	47.0	0.5	47.5
United Kingdom	7.9	12.5	20.4
Subtotal for Europe	9,147.0	203.2	9,350.2
Other competitors:			
Argentina	10.0		10.0
Australia	34.5	102.5	137.0
Brazil	0.3	1.3	1.6
Canada	12.3	12.2	24.5
Chile	10.4	7.0	17.4
China			
India	11.7	3.3	15.0
Japan	3.1		3.1
Korea	1.4		1.4
New Zealand	3.9	139.5	143.4
Norway	103.5		103.5
Sought Africa	15.0		15.0
Thailand	7.6		7.6
Turkey	31.0	19.7	50.7
Subtotal	244.7	285.5	530.2

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TABLE 1.—COMPETITORS' 1996 EXPENDITURES ON AGRICULTURAL EXPORT MARKET PROMOTION¹
AND EXPORT SUBSIDIES²—Continued

[In millions of U.S. dollars]

	Government appropriation	Producer/ industry levies	Total expenditures
23-country total	9,391.7	488.7	9,880.4

¹Market promotion expenditures are for the most recent full year available and are drawn from 1996 FAS Posts' Special Request cables, additional communications with the Posts and other information. In most cases, the numbers are 1995 or 1996 budgets for national promotion agencies and producer boards. Posts do not have access to regional and local government promotion expenditures. The methodology for determining the breakdown of export market development funding is outlined in the "end notes" at the end of this report.

²Direct export subsidies included in this table are an estimated: \$9 billion budgeted by the EU for export subsidies in 1996; \$1.1 million for 1994/95 Indian fruit export transportation subsidies; \$83 million for 1995 Norwegian export subsidies for meat and dairy products; \$15 million for 1995 South African agricultural product export subsidies; \$6 million for Thailand's 1995 rice export subsidies; and \$30 million for Turkey's 1996 agricultural export subsidies. Estimated export subsidies totaled \$9.135 billion as compared with \$745.3 million in export market promotion expenditures.

PREPARED STATEMENT OF THE U.S. APPLE ASSOCIATION

On behalf of the U.S. apple industry, the U.S. Apple Association appreciates the opportunity to provide comments on the appropriations for the U.S. Department of Agriculture (USDA) for fiscal year 1998.

Our focus is on three agencies of the Department: the Agricultural Research Service (ARS), the Foreign Agricultural Service (FAS) and the Agricultural Marketing Service (AMS).

The U.S. Apple Association is a non-profit national trade association representing all segments of the U.S. apple industry. Our membership includes 30 state organizations representing approximately 9,000 producers and over 450 individual firms which handle and market the bulk of the nation's apples. Apples are grown commercially in 35 states, with gross returns to growers last year totalling \$1.8 billion. Top producing states include Washington, New York, Michigan, California, Pennsylvania, Virginia, North Carolina, Oregon, Idaho and West Virginia.

FOREIGN AGRICULTURAL SERVICE—MARKET ACCESS PROGRAM (MAP)

All segments of the U.S. apple industry benefit directly from the use of the export promotion funds, which build markets and demand for our domestically produced product, and indirectly strengthen our markets in this country as well. While many FAS activities are important to the apple industry, the U.S. Apple Association believes the Market Access Program (MAP) in particular should be fully funded at its current authorized level of \$90 million. This program is consistent with new international trade rules, helps small businesses, and is effective in promoting U.S. exports.

After nearly a decade of multinational trade negotiations in the Uruguay Round, the global agricultural community is facing substantial trade liberalizing policies. One of the few areas in which government policies can still effect agriculture is export promotion. We support a strong MAP, which is permissible under the Uruguay Round international trade rules.

The U.S. apple industry faces severe competition from around the globe. Most competitors receive significant government funds for generic promotions. Both production and exports from European Union (EU) countries receive government subsidies. Foreign governments spend approximately \$500 million on export promotion and market development. With apple production increases occurring around the world, already severe competition is expected to intensify further.

Apple industry members believe in agricultural export programs and back their support of these programs with cost-sharing contributions of 30 to 75 percent of the total. According to USDA estimates, every \$1 in export promotion funds translates into \$16 in additional agricultural exports. MAP is an investment by the federal government that generates substantial returns to the Treasury and helps American business. MAP has been a sound investment in this nation's agricultural economy.

California, Colorado, Connecticut, Idaho, Maine, Massachusetts, Michigan, New Hampshire, New York, Pennsylvania, Utah, Vermont and Virginia are members of the U.S. Apple Export Council (USAEC). USAEC manages the export promotion activities of these states. One success story of MAP is the experience of Pennsylvania, New York, Michigan and Virginia in exporting to Brazil. In 1994, USAEC identified

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Brazil as an emerging market for U.S. apples exported by its members. Brazil's strengthening economy and its population of more than 160 million people, make it the tenth-largest market in the world. Problems for apples entering the Brazilian market included a lack of trade and consumer awareness, a lack of supplier awareness and competition from other suppliers. The goal in 1995 was to increase exports from the apple industry in four participating states to 130,000 cartons, or to increase market share 4.8 percent.

In the fall of 1995, a tasting demonstration for "USA Apples" was held in hypermarkets in the Sao Paulo area, trade services were provided and attractive consumer materials were developed. The results from the MAP activities in Brazil that year were excellent. Through retail promotions, point-of-sale promotions and consumer advertising, the apple industry exceeded its goal. Exports from the four participating states—Pennsylvania, New York, Virginia, and Michigan—reached 269,479 cartons, accounting for a market share of 9.6 percent. The quantity exported was 2.3 times the level sent the prior year, and exceeded the goal by more than two-fold. The price per carton shipped to Brazil in 1995 averaged \$13.50 per carton for a total value from the four states of \$3.6 million. With the use of only \$80,300 in MAP funds to promote the 1995 crop, the apple industry saw an increase in exports to Brazil of 230 percent.

Each year export markets become increasingly important to apple businesses and related industries. U.S. apple production has steadily grown over the past decade, and these new markets provide outlets for this increased production. It is vital not only to the apple industry but agriculture as a whole to continue trade promotion efforts to help U.S. producers and exporters take full advantage of emerging and existing export markets. It is critical that assistance to small businesses is continued. The program makes export markets more accessible to smaller businesses which would otherwise be unable to individually effectively promote and market their apples around the world.

AGRICULTURAL MARKETING SERVICE—PESTICIDE DATA PROGRAM (PDP)

As requested in the President's budget, we recommend appropriation of \$10.2 million for the Pesticide Data Program (PDP), managed by the Agricultural Marketing Service (AMS) of USDA.

Since 1991, USDA has utilized PDP to collect reliable, scientifically-based pesticide residue data that benefit consumers, food processors, crop protection pesticide producers, and farmers. These data accurately reflect the consumer's actual exposure to pesticides from certain dietary sources. This real-world information allows the U.S. Environmental Protection Agency (EPA) to make more accurate assessments of risk. Without the actual residue data, overly conservative theoretical assumptions of risk are used. These assumptions could lead to withdrawal of pesticide uses that pose no actual human health risk.

On August 3, 1996 the President signed into law the Food Quality Protection Act (FQPA). This landmark legislation requires extensive reevaluation of the safety of agricultural pesticides and requires extensive data to evaluate the risk associated with the exposure to pesticides. Over the next three years, EPA will reevaluate the pesticide tolerances of many of the most important pesticides used on apples. Lacking sufficient data, EPA will make conservative assumptions about the use of pesticides and the resulting exposure. The conservative assumptions could lead to unnecessary cancellations or restrictions of critically important pesticides used on apples. EPA will be able to make a more accurate assessment of the actual risk associated with pesticides using data from PDP. As a result, apple growers will benefit from the continued availability of safe and effective pesticides. It is imperative that the subcommittee support PDP.

In fiscal year 1997, the subcommittee defunded PDP from the USDA budget, but arranged to fund the program through EPA's budget. The U.S. apple industry believes that PDP is better suited to management through USDA and requests reinstatement of this program in the USDA budget.

USDA is the federal entity best equipped to collect the data and administer PDP since it already has working agreements with ten states that participate in PDP. These states represent approximately 75 percent of the nation's fruit and vegetable production, as well as large segments of wheat and milk production in the United States. Management by EPA adds additional expense and bureaucracy to a well managed USDA program.

Also, PDP has provided considerable assistance in confronting barriers to the international trade of American agricultural commodities and in the establishment of international standards. By developing a statistically reliable testing system,

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AMS has used the PDP residue testing results to convince foreign governments that our food is safe, thus enhancing our ability to increase U.S. agricultural exports.

AGRICULTURAL RESEARCH SERVICE—CHILDREN'S FOOD CONSUMPTION SURVEY

The U.S. Apple Association supports the \$6 million funding of the children's food consumption survey as proposed in the USDA fiscal 1998 budget. The data from this survey is expected to lessen the potential that critical pesticides used on apples will be unnecessarily canceled or restricted as a result of implementation of the Food Quality Protection Act.

EPA uses food consumption data from the USDA food consumption survey to evaluate dietary pesticide exposures resulting from different food consumption patterns. EPA currently uses data which was produced from the latest survey conducted in 1978. The data from this survey are inadequate for certain demographic categories such as infants and children.

As previously noted, PQPA implementation will require accurate data to avoid the unnecessary cancellation of critical pesticides used on apples. Under FQPA, EPA must issue a finding that tolerances are safe for infants and children. Lacking sufficient data on infants and children, EPA is required by the new law to use additional margins of safety that could threaten the availability of pesticides used on apples. Data from a new consumption survey would refine EPA's risk assessments and possibly prevent unnecessary cancellations or restrictions on pesticides used on apples. It is also important that the survey is completed as quickly as possible since EPA will make many of its most critical decisions on apple pesticides within the next three years and will proceed on that schedule regardless of the availability of the data. The U.S. apple industry believes that the critical nature of the survey timing justifies a reprogramming request from USDA to do some of the survey work in fiscal year 1997 to provide data to EPA as early in the decision making process as possible.

AGRICULTURAL RESEARCH SERVICE, EASTERN REGIONAL RESEARCH CENTER, WYNDMOOR, PENNSYLVANIA—THE PRESIDENT'S FOOD SAFETY INITIATIVE AND APPLE-SPECIFIC E. COLI RESEARCH

The U.S. Apple Association supports the fiscal 1998 USDA request for additional research funds to address food safety issues and requests that an additional \$300,000 be appropriated to support apple-specific research on E. coli 0157:H7 at the Eastern Regional Research Center in Wyndmoor, Pennsylvania.

The request for additional apple-specific research reflects both the scope and the urgency of the food safety problems faced by 1,500 apple cider producers across the country. There is a critical need to understand how apple cider becomes contaminated and to identify alternative methods of effectively killing pathogens. Little if any research has been conducted in this area.

FDA is also currently considering the need to change federal regulations governing fresh unpasteurized juice production, following several outbreaks of foodborne illness linked to fresh apple cider and orange juice. Due to recent outbreaks from contaminated apple cider, and in particular a well-publicized E. coli outbreak last fall that led to one death, apple producers are already at the forefront of the issue of juice safety, along with other commodities including berries, melons and lettuce. The apple industry is anxious to institute specific changes to enhance the safety of unpasteurized apple juice products, but the industry must first understand the nature of the organism, how juice becomes contaminated and which sanitizers will eliminate harmful bacteria. The Eastern Regional Research Center in Wyndmoor, Pennsylvania is poised to undertake the research that will answer these questions, but current research funds are insufficient to address all aspects of the problem. An increase of \$300,000 allocated specifically to this problem will answer many of the basic questions about the safety of unpasteurized apple juice and allow the apple industry to take decisive action to eliminate any food safety concerns.

While some research has been undertaken by industry, state and other public institutions, there is a critical need for more research and information if these businesses are to continue and the public's health to be ensured.

AGRICULTURAL RESEARCH SERVICE—APPLE-SPECIFIC LEAFROLLER RESEARCH

The U.S. Apple Association requests support for ongoing apple-specific research of \$575,000 and requests an additional \$300,000 to address critical research needs on the leafroller complex. The Research Subcommittee of the U.S. Apple Association has identified leafroller research to be an important national research priority.

Apple growers in all regions of the United States are taking steps to avoid pesticide applications whenever possible. In the Western region of the country, many

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apple growers are engaged in advanced pest management strategies that eliminate the use of broad spectrum pesticide applications. Previously, the broad spectrum pesticides controlled leafrollers, but without those pesticide applications, leafrollers have become increasingly difficult to control. In other apple growing regions, leafrollers have become resistant to commonly used pesticides or they are difficult to control using Integrated Pest Management (IPM). In New York, some orchards are presently sustaining leafroller damage amounting to \$500 per acre.

The apple industry has made tremendous progress in reducing pesticide applications and reducing the risks associated with the use of pesticides. Unless the industry is able to overcome the leafroller complex, IPM efforts will stall at their present level. IPM programs which were developed to control mites using biological control have become practically unworkable due to complications surrounding the leafroller problem. New information about this pest will be a critical factor in determining the apple industry's ability to advance to even more environmentally-friendly production practices.

FOOD QUALITY PROTECTION ACT IMPLEMENTATION

In passing the Food Quality Protection Act (FQPA), Congress provided for the establishment of a minor-use program within USDA. The primary purpose of this office is to provide coordination and policy oversight for specific program areas within USDA that impact minor-use pest management practices including pest management practices within the U.S. apple industry.

Some of these areas would include the issue of meeting grower needs for chemical or nonchemical pest management tools, providing extension and educational services, and direct coordination with other federal agencies, primarily with the U.S. Environmental Protection Agency.

The minor-crop community and the U.S. Apple Association believe that responsibility for this program must be placed at the highest levels of USDA. The U.S. Apple Association believes that the office should take an aggressive leadership role in providing for the needs of minor-use growers including apple growers in the implementation of FQPA.

The U.S. Apple Association believes that implementation of FQPA will require significant amounts of information and data. USDA should assume a role in providing the data and assist the apple industry with risk mitigation measures if necessary.

Implementation of the Food Quality Protection Act could have a significant impact on apple growers and the apple industry. The U.S. Apple Association requests that the subcommittee provide the necessary funds for USDA to respond to this new regulatory challenge.

PREPARED STATEMENT OF DR. WILLIAM W. WALKER, ASSOCIATE DIRECTOR FOR RESEARCH, UNIVERSITY OF SOUTHERN MISSISSIPPI, INSTITUTE OF MARINE SCIENCES, GULF COAST RESEARCH LABORATORY

Mr. Chairman, I greatly appreciate the opportunity to appear before you and the Subcommittee, to thank you for your past support and to discuss the achievements and opportunities relating to the Gulf Coast Research Laboratory Consortium's U.S. Marine Shrimp Farming Program.

My testimony is presented on behalf of the members of the Consortium: The University of Southern Mississippi-Gulf Coast Research Laboratory, Mississippi; the Oceanic Institute, Hawaii; Texas A&M University, Texas; the Waddell Mariculture Research and Development Center, South Carolina; the University of Arizona, Arizona; and Tufts University, Massachusetts.

Today, the United States is not competitive in the farming of marine shrimp. Some 80 percent of all shrimp consumed in the United States today is imported, and virtually all farmed shrimp consumed is produced in foreign countries. Meeting the demands of U.S. consumers presently results in an annual trade deficit of about \$2.5 billion, precluding U.S. jobs and economic benefit.

The U.S. Marine Shrimp Farming Program was initiated in 1984 through congressional initiative resulting in grants to the Gulf Coast Research Laboratory and the Oceanic Institute administered by the Cooperative State Research, Education, and Extension Service (CSREES) of the U.S. Department of Agriculture (USDA). The objectives of the program were then and continue today to be to develop the advanced, second-generation technology processes, products, and services necessary to enable the U.S. shrimp farming industry to become economically viable and to be competitive with its foreign counterparts.

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To date over 35 million dollars have been invested in the U.S. Marine Shrimp Farming Program. According to the USDA, the technologies, products, and services developed have catapulted the U.S. into a world leadership role in second generation shrimp farming. It is widely recognized that this effort has been funded by congressional initiative spearheaded by yourself, this subcommittee, and your colleagues in the Senate and in the House.

Whereas the Consortium has accomplished much, its work is not finished. The shrimp farming program in the U.S. has successfully cleared only its initial hurdles. The U.S. shrimp farming industry today remains totally dependent on the Consortium for its continued survival and development. In 1995, 1996, and again in 1997, exotic viruses found their way to isolated shrimp farms in this country with devastating impacts. These occurrences demand that the Consortium complete the development of biosecure and environmentally friendly shrimp growout systems, better understand the diseases which continue to plague our industry, and develop advanced disease control measures, including disease resistant shrimp.

Let me take a few minutes to highlight the accomplishments of the U.S. Marine Shrimp Farming Program to date, and then address the vulnerability and eventual independence of the industry.

ACCOMPLISHMENTS

The economic impact of shrimp farming in the United States increased from about \$22 million in 1991 to over \$65 million in 1994. The number of jobs associated with shrimp farming in this country tripled during that period. While viral diseases caused significant setbacks in 1995 and 1996, there is every reason to believe that the industry will enjoy successes similar to and greater than those in 1994 once the Consortium has come to terms with these disease agents. In fact, 1996 production of farmed shrimp in Texas, which produced nearly 75 percent of all farmed shrimp in the U.S. in 1994, more than doubled the state's 1995 output, due to the research and development by the U.S. Marine Shrimp Farming Program and to the funding for these efforts by the Federal government.

Even in the face of the aforementioned disease problems, the U.S. marine shrimp farming industry is expanding, indicating industry confidence in the U.S. Marine Shrimp Farming Consortium.

The U.S. is presently the only producer and exporter of high health and genetically improved shrimp broodstock and seed. The U.S. is the world supplier of high health and genetically improved shrimp stocks.

Expansion continues with respect to private U.S. seed hatcheries and broodstock multiplication centers. Several new U.S. companies have been formed.

The U.S. is also the world leader in shrimp disease diagnosis, prevention, and treatment technologies. New U.S. companies have been established which produce and export diagnostic products.

Private industries are partnering with the U.S. Marine Shrimp Farming Consortium in their quest to develop and transfer needed second-generation technologies, products, and services. It is our expectation that two additional major partnerships will come to fruition in calendar year 1997.

INDUSTRY VULNERABILITY

Private industries spawned as the result of the U.S. Marine Shrimp Farming Program remain dependent on that program. It is imperative that the efforts of the Shrimp Farming Program continue and expand to foster the viability of activities within the private sector until they become self-sufficient. Product and technology development and transfer continues today, but they are presently incomplete. Presently, all captive stocks of high health and genetically improved shrimp are produced, maintained, and controlled by the Shrimp Farming Program and provided to private sector industries at or near cost.

The industry is today more than ever before dependent on the Shrimp Farming Program for disease diagnosis, prevention and treatment methods, and technologies. The appearance of exotic viruses in U.S. shrimp farms, while temporarily devastating, underscored the need for continued research to develop the advanced biosecurity and disease control technologies necessary to assure industry independence. The U.S. Marine Shrimp Farming Program is the only group in the world capable of developing these technologies and procedures. Simply put, failure of the Shrimp Farming Program to be able to continue its research and development activities will clearly result in the death of the U.S. marine shrimp farming industry.

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INDUSTRY INDEPENDENCE

We anticipate that in a few years, probably not more than five, the U.S. shrimp farming industry will become essentially self sufficient by following commercialization plans developed by the Shrimp Farming Program. At that time, the mission of the U.S. Marine Shrimp Farming Program will be accomplished and the U.S. will be a major player in the \$4+ billion world shrimp farming industry. We expect that the trade deficit will be decreased by at least one billion dollars. The economic impact of this reduction will exceed \$1.5 billion per year and contribute about 50,000 additional U.S. jobs.

The Consortium continues to receive substantial support and encouragement from CSREES in their administration of grant funds. CSREES has indicated that this represents a model program for resolving important problems and capturing opportunities in both agriculture and aquaculture. These sentiments have been underscored by independent review of Consortium operations.

To begin completion of our remaining tasks, the Consortium requests operational support in the amount of \$5.0 million and a one-time capital grant in the amount of \$5.0 million for fiscal year 1998.

Mr. Chairman, the U.S. shrimp farming industry and our Consortium deeply appreciate your support, and we respectfully seek your favorable consideration of our request.

PREPARED STATEMENT OF THE UNITED STATES TELEPHONE ASSOCIATION

SUMMARY OF REQUEST

Project involved.—Telephone Loan Programs Administered by the Rural Utilities Service.

Actions proposed.—Supporting RUS loan levels for the hardship, cost of money, Rural Telephone Bank and loan guarantee programs in fiscal year 1998 in the same amount as loan levels specified in the Fiscal Year 1997 Agriculture Appropriations Act (Public Law 104-180). Also supporting an extension of the language removing the 7 percent interest rate cap on cost of money loans for fiscal year 1998. Also supporting continuation of the restriction on the retirement of class A Rural Telephone Bank stock in fiscal year 1998 at the level contained in Public Law 104-180 and an extension of the prohibition against the transfer of Rural Telephone Bank funds to the general fund. Supporting funding for \$150 million in loan authority and \$21 million in grants designated for distance learning and telemedicine purposes.

The United States Telephone Association (USTA) represents over 1,000 local telephone companies that provide over 95 percent of the access lines in the United States. USTA members range from large publicly-held corporations to small family-owned companies and cooperatives owned by their customers. We submit this testimony in the interests of the members of USTA and the customers they serve.

Local telephone companies are dedicated to fulfilling two goals: serving the nation's telecommunications needs and maintaining universal service at reasonable rates. USTA members, both large and small, firmly believe that the targeted assistance offered by a strong and viable telephone loan program remains essential in order to maintain a healthy and growing rural telephone industry that contributes to the provision of universal telephone service. We appreciate the strong support this committee has provided for the telephone program since its inception in 1949 and look forward to a vigorous program for the future.

A CHANGING INDUSTRY

As this Congress recognized through passage of the Telecommunications Act of 1996, the telephone industry is in the midst of one of the most significant changes any industry has ever undergone. Both the technological underpinnings and the regulatory atmosphere are dramatically different. Without system upgrades, rural areas will be left out of the emerging information revolution. This will impact not only rural Americans, but people in urban areas that need to communicate with those in rural areas.

As the need for new services evolves, rural telephone systems must have access to low cost RUS financing to fund technological improvements such as digital switching equipment, access to services such as the Internet, updated switch software to provide advanced services and communicate with discrete signalling networks and associated data bases, and broadband fiber optic lines.

Regulatory uncertainty, caused by recent actions of the Federal Communications Commission and the Federal State Joint Board with regard to interconnection and

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universal service, have caused many rural telephone to examine the feasibility of continuing to invest in the communications infrastructure of rural America. Needed upgrades to bring modern services, including Internet access, to rural areas, may be stalled. Previously underserved areas newly acquired by RUS borrower companies may not get the reliable one-party service that they have expected and deserved for many years.

As Senator Conrad Burns put it at USTA's 1996 Convention: "People say to me 'My gosh, how do you make a living in Montana? We go through here and we don't see anything for miles!' And I say—You know what? There's people in houses in Montana, and they've got faces, and they've got dreams too, and their needs are the same as anybody in any other part of this country. I represent a big state. From one end to the other is further than from Washington, D.C. to Chicago. So I've got to deal with distances. But you know what? Our kids are just as important, their eyes are just as bright, and their dreams are just as valid as any other kid's. They just want an opportunity, and local telephone companies are a vital part of the infrastructure that will allow them that."

Of course, Mississippi and the rest of rural America are no different. RUS borrowers have built the infrastructure to serve those kids and their parents. But our members have a responsibility to their stockholders and their ratepayers to not make investments they can't pay for by charging reasonable rates. Many local telephone companies are concerned about making the long term commitments needed to build the rural telecommunications infrastructure. They are worried about fair treatment from regulators. RUS has always been an important element in convincing local telephone companies to make needed investment.

After all, RUS is a voluntary program designed to provide incentives to local telephone companies to build the plant essential to economic growth. RUS endures because it is a brilliantly conceived public private partnership in which the borrower telephone systems are the conduits for benefits from the federal government to rural telephone customers, the true beneficiaries of the RUS program. The government's contribution is leveraged by the equity, technical expertise and dedication of local telephone companies.

The Telecommunications Act of 1996 recognized the key role telecommunications plays in education and health care, particularly in rural areas. Business, large and small, and parents and children, are making increased use of the limitless resource of the Internet. Local telephone companies are providing customers connections to the Net. RUS financed modern, reliable facilities are necessary to access these advanced telecommunications services at reasonable cost.

Particularly in rural areas, telecommunications is a substitute for transportation and an especially important element in economic growth. Not only do RUS telephone companies directly employ 30,000 Americans, RUS loans have a multiplier effect. RUS seed dollars stimulate business activity and create jobs, generating Federal, state and local tax revenues.

RECOMMENDATIONS

Continuation of the loan levels and associated subsidy amounts for the RUS telephone loan programs that were recommended by this committee and signed into law for fiscal year 1997 would maintain our ability to adequately serve the nation's telecommunications needs and to maintain universal service. Through a dramatic restructuring, carefully and thoughtfully accomplished by Congress, the RUS telephone loan programs have more than met their responsibility to contribute to fiscal restraint and should be continued at their present levels of investment in the infrastructure of rural America.

Request support for streamlining and deregulation

In our testimony before this subcommittee last year, we requested support for efforts by RUS to administratively streamline RUS procedures, reduce paperwork burdens on RUS borrowers, automate antiquated systems, and deregulate to the extent consistent with preservation of the government's loan security. We have been disappointed that no initiatives have yet been made by the RUS telephone program to fulfill these worthy goals. Meanwhile, both the government and the borrowers have been burdened with another year of excessively regulatory and cumbersome procedures. We heartily support efforts to reduce red tape and reduce costs for all parties and recommend that Congress support them as well by encouraging RUS to accomplish them expeditiously.

Request support for elimination of the 7 percent cap on cost of money loans

Last year, Congress also eliminated the seven percent "cap" placed on the insured cost-of-money loan program. If long term Treasury interest rates exceeded the 7 per-

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cent ceiling contained in the authorizing act, adequate subsidy would not be available to support the program at the authorized level. This would be extremely disruptive and hinder the program from accomplishing its statutory goals. Accordingly USTA supports continuation of the elimination of the seven percent cap on cost-of-money insured loans in fiscal year 1998.

Request support for continued restriction on retirement of government stock in the Rural Telephone Bank

The restriction on the retirement of the amount of class A stock by the Rural Telephone Bank, adopted last year, should be continued. The Bank is currently retiring Class A stock in an orderly, measured manner as current law requires. This should continue. The Committee should also continue to protect the legitimate ownership interests of the Class B and C stockholders in the Bank's assets by continuing to prohibit a "sweep" of those funds into the general fund.

Recommended loan levels

USTA recommends telephone loan program loan levels for fiscal year 1998 as follows:

[In millions of dollars]	
RUS insured hardship loans (5 percent)	75
RUS insured cost-of-money loans	300
Rural Telephone Bank (RTB) loans	175
Loan guarantees	120
Total	670

The President's budget proposes a reduction of \$35 million in the hardship program designed for the neediest borrowers. If loans approved already this year are added to applications already in hand, all fiscal year 1997 hardship funds will be used up and another \$60 million will have to be carried over into fiscal year 1998. Under the President's proposal, one-third of those loans won't be able to be made until fiscal year 1999. And applications are still coming in. Rural Americans cannot wait any longer to be full participants in the Information Age. One and a half million dollars in subsidy authority would restore this proposed \$35 million cut in the hardship loan level. We cannot imagine a more deserving use of scarce government resources for the benefit of rural Americans.

Distance learning and telemedicine

USTA strongly supports the loan and grant proposal and recommends its funding for fiscal year 1998 at the levels proposed in the Administration's budget submission, that is, \$21 million for the grant program and \$150 million for the loan program. This program is a perfect complement to the traditional RUS telephone loan programs. For distance learning and telemedicine to become a reality, schools and hospitals need training and equipment. Similarly, local telephone companies need modern infrastructure to connect these facilities to the telecommunications network.

CONCLUSION

Our members take pleasure and pride in reminding the Subcommittee that the RUS telephone program continues its perfect record of no defaults in almost a half century of existence. RUS telephone borrowers take deadly seriously their obligations to their government, their nation and their subscribers. They will continue to invest in our rural communities, use government loan funds carefully and judiciously and do our best to assure the continued affordability of telecommunications services in rural America. Our members have confidence that the Subcommittee will continue to recognize the importance of assuring a strong and effective RUS Telephone Program through authorization of adequate loan levels.

PREPARED STATEMENT OF SAM J. MASELLI, EXECUTIVE VICE PRESIDENT, WESTERN
RURAL TELEPHONE ASSOCIATION

SUMMARY OF REQUESTS

Program of interest.—Telecommunications lending programs administered by the Rural Utilities Service (RUS) of the U.S. Department of Agriculture.

Recommendation.—WRTA supports loan levels for fiscal year 1998 at such amounts as they have been designated in the Agriculture Appropriations Act for Fiscal Year 1997 (Public Law 104-180) for hardship, treasury-cost, Rural Telephone

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Bank (RTB), and guaranteed loan programs and the associated subsidy to support hardship and RTB loans at existing levels. WRTA also supports the President's budget request for funding of the RUS's Distance Learning and Telemedicine (DLT) programs at \$21 million in grants and \$150 million in loan authority. WRTA supports a continuation of the current fiscal year's policy of language removing the 7 percent interest rate ceiling on Treasury-cost loans for fiscal year 1998. Finally, WRTA supports the continued provisions contained in Public Law 104-180 restricting retirement of RTB class A stock in fiscal year 1998 and prohibiting the transfer of RTB funds to the general fund.

Mr. Chairman and Members of the Subcommittee: It is an honor and privilege to have the opportunity to discuss the unique infrastructure financing needs of the rural local exchange carrier (LEC) industry. My name is Sam J. Maselli, and I am the Executive Vice President of the Western Rural Telephone Association (WRTA). WRTA is a regional trade association representing nearly 150 small rural commercial and cooperative telephone systems throughout the western United States and the Pacific Rim territories.

BACKGROUND

WRTA's member systems, like most of this nation's independent LEC's, evolved to serve the high cost, low density areas in the rural western United States. Congress recognized this unique dilemma confronting America's rural LEC's as early as 1949 when it amended the Rural Electrification Act (RE Act) to create the REA telephone loan program. With the future of rural America in mind, Congress charged the REA with the responsibility for making low interest rate loans to both " * * * furnish and improve * * * " rural telephone service at the local exchange level.

In subsequent years, Congress has periodically acted to amend the RE Act to insure that the original mission of the program is fully met. In 1971, the Rural Telephone Bank (RTB) was created as a supplemental source of direct loan financing. In 1973, the REA was provided with the ability to guarantee Federal Financing Bank (FFB) and private lender notes. And in 1993, the Congress established a fourth lending component, the Treasury-cost program, and Congress eliminated most of the subsidy costs associated with the administration of the program. The formal consolidation of the Department's utility programs through transferring the telecommunications loan and technical assistance programs of the REA to the Rural Utilities Service (RUS) in 1994 further served to enhance and update the effectiveness of the agency in promoting rural infrastructure development.

Due to the difficulty of providing service in high cost, low density areas, Congress provided for long-term, fixed rate loans available at reasonable rates to borrowers to assure that rural citizens benefited from the highest quality of telephone service and affordable subscriber rates. Through this ongoing commitment to capital financing, Congress affirmed the goal of comparable and affordable telephone service for rural Americans as their urban counterparts.

As a result of this commitment to rural telecommunications, rural America has greatly benefited from the highest quality of information technology. Through its effort, Congress has played a critical role in developing a rural telecommunications infrastructure financing program which best responds to the needs of rural America.

THE OBLIGATIONS OF THE INDUSTRY CONTINUE

The RUS telecommunications loan program represents a remarkable public/private partnership success story which continues to produce tangible results in the lives of rural citizens. With the assistance of RUS capital and technical standards, rural telephone systems are providing modern telecommunications services of a highly sophisticated quality. However, with the rapid pace of change in the development of information technology, the need for RUS telecommunications lending is greater than ever.

Due to the nature of rural areas, particularly in the rural West, the challenge of providing modern telecommunications services is formidable. Compared to their urban counterparts, rural communities are faced with higher poverty rates, lower income levels, physical isolation and higher costs associated with deploying modern infrastructure. Economic development is often frustrated by these unique rural conditions. With the United States in the midst of the "information revolution," rural areas are confronted with the dilemma of being left behind.

The implementation of the Telecommunications Reform Act of 1996 has also added to the uncertainty and collective uneasiness of the rural telecommunications industry. Despite the Act's solid rural safeguard provisions, the Federal Communications Commission (FCC) has embarked in a regulatory direction which explicitly threatens rural ratepayers, services, and infrastructure investment.

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Through attempting to “jump-start” competition, the FCC has threatened to reduce the effectiveness of the Act’s specific rural protections and universal service provisions. Inadequate regulatory proposals to revamp our nation’s universal service and other cost-recovery mechanisms through idealized modeling arrangements threatens the embedded investment of rural telephone systems who rely on these critical policies developed over the decades for their continued financial viability. Moreover, the FCC Order dictating how new entrants interconnect with incumbent LEC’s networks and provide compensation for unbundled network elements has already resulted in a stay issued by the 8th Circuit Court of Appeals in St. Louis, MO.

Congress must keep a vigilant watch over the FCC to ensure that implementation of the Act is consistent with congressional intent. This is particularly true of RUS program borrowers where the federal government has a significant loan security interest at stake. Whatever the outcome of the regulatory process, the RUS telecommunications loan program will be as important as ever to rural systems attempting to modernize their networks and improve service to rural residents.

THE PROMISE OF THE RUS PROGRAM

Despite the obstacles to rural economic revitalization, information technology holds significant promise for our rural areas. As we have seen in recent years, information services can directly benefit our schools, libraries, hospitals and clinics. In addition, telecommunications services facilitate commercial opportunities such as telemarketing, insurance, and manufacturing not possible in previous years.

While the explosive nature of technological change offers our rural communities genuine opportunities for economic and social progress, special attention must be placed on providing rural areas with the appropriate tools to address their unique set of needs. In this context, the RUS telecommunications loan program is playing a critical front-line role in ensuring that rural America is linked to the Information Superhighway.

Today, RUS borrowers average only 6 subscribers per mile compared to 37 per mile for the larger, urban-oriented telephone systems. This results in an average plant investment per subscriber that is 38 percent higher for RUS borrower systems. Without the availability of affordable capital financing, enhancing telecommunications networks for rural communities would be untenable.

The RUS is providing affordable capital financing to allow its borrowers to upgrade their plant and facilities for digital switching, fiber optic cabling, emergency 911, and other enhanced features such as ISDN, SS7, and CLASS. Due to the dependability of the RUS program, borrowers provide their rural subscribers with cutting edge services.

RUS telecommunications lending also performs a pivotal function of stimulating substantial private investment. In fiscal year 1995, a subsidy of \$4.8 million generated \$584 million in federal loans and loan guarantees which leveraged an additional \$2.63 billion of private investment, resulting in a total investment of \$3.22 billion in rural telecommunications infrastructure.

In addition, the RUS telecommunications program boasts a proud financial record probably unprecedented for federal loan programs. To date, the program has never experienced a borrower-related default in its history. At the end of 1996, over \$9 billion in principal and interest had been paid by RUS borrowers. For nearly 48 years, this successful public/private partnership has worked.

In 1993, this partnership agreed to a \$31 million cut in the name of debt reduction, and it agreed to a twelve year freeze in program loan levels while other programs grew by at least the rate of inflation. This partnership is committed to providing service to areas long neglected by others. Ultimately, this partnership will foster the rural information network of the 21st century.

SPECIFIC RECOMMENDATIONS FOR THE SUBCOMMITTEE’S CONSIDERATION

RUS Telecommunications loan program

Increasing demands for expanded telecommunications services and infrastructure upgrades suggests that the level of need continues. Congressional mandates as a result of the Rural Electrification Restructuring Act (RELRA) of 1993 (Public Law 103-129) have placed additional obligations on RUS borrowers to upgrade their technology in order to maintain their loan eligibility.

To address the persisting need, WRTA recommends that the Committee consider the following RUS Telecommunications Program loan levels for fiscal year 1998:

5 percent hardship loans	\$75,000,000
Treasury-cost loans	300,000,000

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FFB loan guarantees	120,000,000
Rural Telephone Bank loans	175,000,000
Total	670,000,000

These loan levels are the same as the current fiscal year's funding provided by Congress and represent a genuine commitment to rural telecommunications.

Removal of interest rate ceiling on treasury-cost loans

WRTA supports language removing the 7 percent interest rate cap on the program's Treasury-cost loans. This provision was originally included in the Agriculture Appropriations Act for Fiscal Year 1996 and continued for the current fiscal year. The inclusion of this provision for fiscal year 1998 will prevent a potential disruption of the program in the case where interest rates exceed 7 percent and insufficient subsidy cannot support authorized loan levels. Stated simply, it is a continuation of current policy, and it promotes the viability of the program at zero cost.

Rural Telephone Bank (RTB) issues

During the course of fiscal year 1996, the Rural Telephone Bank began the statutory retirement of class A, government-owned stock. WRTA supports the restriction on accelerating the privatization process as conceived beginning in fiscal year 1996 of no more than 5 percent of total class A stock retired in one year. We believe that a continuation of this policy best addresses the orderly and systematic privatization of the RTB.

WRTA also urges the Committee to continue the prohibition against the transfer of bank funds to the general fund of the Treasury along with the requirement that the bank receive interest on those funds. The private B and C stockholders of the RTB have an interest in the assets of the bank and the protection of all funds.

Distance learning and telemedicine (DLT) loans and grants

The RUS Distance Learning and Telemedicine (DLT) program has proven to be a remarkable tool for promoting rural development. The authorization of a new DLT loan and grant program administered by the RUS in last year's Farm Bill (Public Law 104-127) holds significant promise for the deployment of modern technology for scores of our rural communities.

WRTA supports the President's request for \$150 million in loans delivered at the government's cost-of-money and \$21 million in grants for DLT purposes. We believe that the proposed level adequately responds to the overwhelming demand for DLT resources since the implementation of the program by the RUS in 1993.

CONCLUSION

Rural economic and social development and access to advanced information services are an inseparable combination for the future. The RUS telecommunications program has proven to be an indispensable tool for rural America. Its existence continues to improve the nature of rural life in our nation, particularly in our isolated Western communities.

We appreciate the opportunity to comment on this critical program. Thank you for your time and consideration of this issue.

PREPARED STATEMENT OF HON. JIM GERINGER, GOVERNOR, STATE OF WYOMING

This testimony supports fiscal year 1998 funding for the Department of Agriculture in the amount of \$200,000,000 for the Environmental Quality Incentives Program (EQIP) in order that a portion of that funding may be used for the Colorado River Salinity Control Program, one of the programs made a part of the EQIP by Public Law 104-127.

This testimony supports fiscal year 1998 appropriations for the Department of Agriculture's Environmental Quality Incentives Program to carry out Colorado River salinity control activities. You recently received testimony from the Colorado River Basin Salinity Control Forum (Forum) on behalf of the seven Colorado River Basin states that was submitted by the Forum's Executive Director, Jack Barnett. The State of Wyoming, a member state of the Forum, concurs in that testimony. EQIP funding is critically important to maintaining the basin-wide Water Quality Standards for Salinity.

The Forum's testimony is in accordance with the Advisory Council's written recommendations. Wyoming is represented on both the Colorado River Basin Salinity Control Forum and the Colorado River Basin Salinity Control Advisory Council. The 1974 Colorado River Basin Salinity Control Act (Public Law 93-320) created the Ad-

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visory Council. Like the Forum, the Advisory Council is composed of gubernatorial representatives of the seven Colorado River Basin states, and serves as a liaison between the seven States and the Secretaries of the Interior and Agriculture and the Administrator of the Environmental Protection Agency (EPA). It advises these Federal officials and the involved agencies on the progress of efforts to control the salinity of the Colorado River and annually makes funding recommendations, including the amount believed necessary to be expended by the USDA for its onfarm Colorado River Salinity Control (CRSC) Program. Although the CRSC Program has now been made a part of the EQIP, it is anticipated that the Advisory Council will continue to make recommendations to the USDA relative to the amount of EQIP funding which should be devoted to accomplishing salinity control.

The Plan of Implementation and the numeric water quality criteria set for three Lower Colorado River stations constitute the State-adopted, EPA-approved, water quality standards for salinity the Colorado River. Jointly developed by the States and involved Federal agencies, the Plan of Implementation has been prepared and is being carried out to ensure continuing compliance with the numeric water quality criteria for salinity. Falling behind the schedule set forth in the Plan raises vitally important questions about whether the Basin States can be assured that the water quality numeric criteria, a component of the Water Quality Standards for the Colorado River, will continue to be complied with in the future.

During its October, 1996 meeting, the Advisory Council recommended that at least \$9,800,000 be expended by the Department of Agriculture for cost-sharing to implement salinity reduction practices (funds that are matched with individual contractor's cost-share funds) in fiscal years 1998 and 1999, plus sufficient funds for administration, technical information and education, in order to assure that the progress of removing salt and preventing additional salt loading into the Colorado River system stays on schedule with the Plan of Implementation. Should a lesser funding level be provided for on this important basin-wide water quality program, the progress (as measured in tons of salt prevented from entering the Colorado River system) achieved by the USDA component of the multi-agency, state and federal Colorado River Basin Salinity Control Program will fall far short of meeting the rate of salinity control determined to be necessary in the Plan of Implementation.

Accordingly, if less salt is removed from the Colorado River than called for in the Plan of Implementation, it is apparent that the salinity levels of Colorado River water at the three downstream stations will in the future likely exceed the numeric criteria values established for those stations. Further, it is unmistakable that funding shortfalls will result in significantly higher costs to implement the same level of salinity control in future years. Farmers and agricultural producers in the areas of Colorado, Utah and Wyoming where the Program's salinity control efforts are underway are patiently waiting for the appropriation of funds to the Department of Agriculture so that they can match their 30 percent local-cost sharing against those federal funds and proceed with the installation of measures to reduce salt loading into the Colorado River system. Literally hundreds of producers have indicated their desire and intent to participate in this Program—but are unable to do so on account of the lack of Federal cost-sharing funds.

The Federal Agriculture Improvement and Reform Act of 1996 (Public Law 104-127) provided for the CRSC Program to continue in the future—as a part of the Environmental Quality Incentives Program (EQIP). We view the inclusion of the Salinity Control Program in EQIP as a direct recognition on the part of Congress of the Federal commitment to maintenance of the water quality standards for salinity in the Colorado River—and that the Secretary of Agriculture has a vital role in meeting that commitment. We urge the Subcommittee to remind the Secretary of Agriculture of his obligations under that Federal commitment as he makes decisions about national conservation priority areas and priority resource concerns. While the intention of the Public Law 104-127 is that the nation's agricultural programs are "locally led and driven" and we agree with that approach, it is also necessary to recognize the Federal role and obligation relative to this basin-wide water quality maintenance program. The USDA portion of the overall salinity reduction effort is critical to the overall effort.

I wish to thank you for the opportunity to submit this testimony and would request, in addition to your consideration of its contents, that you make it a part of the formal hearing record concerning fiscal year 1998 appropriations for the Department of Agriculture. In accordance with the Subcommittee's direction, I have submitted three copies of this statement.

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